

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

	x	
In re BHP BILLITON LIMITED	:	Civil Action No. 1:16-cv-01445-NRB
SECURITIES LITIGATION	:	
	:	<u>CLASS ACTION</u>
	:	
This Document Relates To:	:	CONSOLIDATED AMENDED
	:	COMPLAINT FOR VIOLATIONS OF THE
ALL ACTIONS.	:	FEDERAL SECURITIES LAWS
	:	
	x	<u>DEMAND FOR JURY TRIAL</u>

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Lead Plaintiffs City of Birmingham Retirement and Relief System and City of Birmingham Firemen's and Policemen's Supplemental Pension System, along with Plaintiff James A. Crumpley (together, "Plaintiffs"), on behalf of themselves and on behalf of all others similarly situated, allege the following based upon personal knowledge as to themselves and their own acts, and upon information and belief as to all other matters based on the investigation conducted by their attorneys, which included, among other things, the review and analysis of: (i) Securities and Exchange Commission ("SEC") filings by BHP Billiton Limited ("BHP Ltd.") and BHP Billiton Plc ("BHP Plc") (together, "BHP" or the "Company"); (ii) records from federal and state public prosecutors, government agencies, and federal and state courts in Brazil; (iii) sworn testimony provided to Brazilian prosecutors by former employees of Samarco Mineração, S.A. ("Samarco"), consultants, and other witnesses with relevant knowledge; (iv) pleadings and evidence gathered in civil and criminal proceedings in Brazil against Samarco and its joint owners, BHP and Vale, S.A. ("Vale"); (v) minutes of meetings of Samarco's board of directors (the "Samarco Board"); (vi) the allegations contained in pleadings filed in *In re Vale S.A. Securities Litigation*, No. 1:15-cv-09539-GHW (S.D.N.Y.) (the "Vale Litigation"), as well as certain sources incorporated therein; (vii) transcripts of earnings calls and investor conferences with BHP senior management; (viii) press releases, investor presentations, and other information issued or disseminated by Defendants (defined below); (ix) news articles and media coverage of the events giving rise to this action; and (x) research and reports by securities and financial analysts.

The investigation of Plaintiffs' attorneys is continuing, yet certain additional facts supporting these allegations are known only to Defendants or are exclusively within their custody or control. Plaintiffs believe that substantial evidentiary support will exist for the allegations set forth herein after a reasonable opportunity for discovery.

## **I. NATURE OF THE ACTION**

1. This is a federal securities class action on behalf of all purchasers of the American Depositary Receipts (the “ADRs”) of the Company between September 25, 2014 and November 30, 2015, inclusive (the “Class Period”), seeking to pursue remedies against the Company and certain of its current and former executive officers and/or directors and managers (together, “Defendants,” as further defined below) under Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 (the “Exchange Act”) and Rule 10b-5 promulgated thereunder (17 C.F.R. §240.10b-5).

2. This class action arises out of what is widely regarded as the worst environmental disaster in Brazil’s history. On November 5, 2015, Samarco’s Fundão tailings dam burst, releasing 12,000 Olympic swimming pools’ worth of wastewater (known as tailings) generated by Samarco’s mining operations in the Brazilian state of Minas Gerais. When the dust had settled, the tailings had engulfed the downstream town of Bento Rodrigues, killed 19 people and injured many others, caused catastrophic property damage, and contaminated the Rio Doce River and the water supply for 200 towns. Toxic sludge ultimately traveled across two Brazilian states via the Rio Doce before reaching the Atlantic Ocean, wreaking further harm along the way.

3. In the wake of the disaster, Samarco was forced to suspend its mining operations and BHP, Vale and Samarco were subjected to governmental investigations and judicial proceedings in Brazil with potential civil exposure of more than \$5 billion, possible criminal exposure, and untold reputational harm. Those proceedings are ongoing. Additionally, Vale was named as a defendant in the Vale Litigation, a separate securities fraud lawsuit pending in the United States District Court for the Southern District of New York arising out of its disclosures to investors regarding, among other things, the safety of its mining operations. In response to the catastrophe resulting from the failure of the Fundão dam, Brazil is contemplating legislation to outlaw upstream tailings dams such as the Fundão dam, which are less costly to construct but far more dangerous.

4. As a result of the Brazilian investigations and proceedings, as well as investigations by members of the global news media, information has come to light that confirms Defendants' knowledge and awareness of material facts, previously undisclosed to the public, that significantly undermine the truth, accuracy and completeness of statements that BHP and its representatives made to investors and otherwise publicly. As detailed herein, these statements were made throughout the Class Period about the safety of the Company's mining operations, Samarco's iron ore production and related matters, without regard for their veracity and in contravention of the obligation to make full, and truthful, disclosure. In fact, as alleged below, Defendants continued making misleading statements even after the Fundão dam burst, when they denied that the tailings were toxic in nature.

5. Shortly before the Class Period, BHP and Vale – co-owners of Samarco – oversaw the implementation and completion of a \$3.2 billion project, which they financed, that increased the iron ore production capacity of Samarco by approximately 37% (the "P4P Project"). The Fundão dam was chosen to accommodate the growth in tailings resulting from increased iron ore mining and production associated with the P4P Project. As a result, the Samarco Board approved a project to elevate the Fundão dam by 20 meters in April 2015, to be followed by another 20 meters in August 2015. The P4P Project expanded Samarco's iron ore pellet production capacity from 22.3 million tons per annum ("Mtpa") to 30.5 Mtpa.

6. However, as Defendants knew, but investors did not, Samarco systematically ignored warning signs regarding the precarious condition of the Fundão dam. These red flags ranged from visible cracks in the dam's structure to persistent emergency signals from instruments, known as piezometers, designed to monitor and measure groundwater pressure. In fact, these issues were so serious that the Samarco Board – which included several BHP representatives – frequently discussed remediating them at meetings before and during the Class Period.

7. Additionally, concerns regarding some of these problems were raised in October 2013 in a report prepared by the Instituto Pristino (the “Pristino Report”), a Brazilian not-for-profit environmental and geotechnical modelling institute – a report within BHP’s possession in 2013, as defendant Jac Nasser (“Nasser”), Chairman of the BHP Board, confirmed in the wake of the Fundão dam failure. The Pristino Report warned of design deficiencies associated with the Fundão dam and its planned expansion to accommodate the mine’s increased production capacity, and recommended extensive monitoring of the dam and Samarco’s submission of an emergency contingency plan given the proximity of the dam to the nearby village of Bento Rodrigues.

8. Compounding these problems was the fact that Vale regularly used the Fundão dam to dispose of tailings from other mining operations nearby, pursuant to a contract with Samarco. Indeed, Brazilian prosecutors reportedly obtained documentation confirming that tailings from Vale’s own operations accounted for up to 28% of overall tailings stored by the Fundão dam. This should have come as no surprise to BHP, given that Joaquim Pimenta de Avila (“Pimenta de Avila”), the designer of the dam, testified that he was asked “to design the Fundão dam to receive tailings from Samarco’s Germano Complex and slurry from Vale S.A.’s Alegria Complex[.]”

9. Also evidencing BHP’s disregard for the precarious condition of the Fundão dam was Samarco’s refusal to implement an emergency plan to monitor safety at the dam in 2009. Randal Fonseca (“Fonseca”), the owner of Rescue Training International Consulting (“RTI Consulting”), explained that the devastation caused by the dam break could have been avoided if Samarco had spent \$1.5 million to institute the plan. In 2009, Samarco hired RTI Consulting to develop an emergency action plan (“EAP”) for its mining units, including the Germano complex and the Fundão dam. According to Fonseca, however, the Samarco Board refused to approve the plan because it was too costly and more complex than what was required under Brazilian law.



10. Despite these adverse facts, which Defendants knew or recklessly disregarded, BHP and its senior executives repeatedly emphasized the Company's focus on the health and safety of its employees and the communities in which it operates; safety, risk management and monitoring protocols and controls; and compliance with local laws and regulations. Furthermore, Defendants favorably described the P4P Project and the expansion of Samarco's mining operations, tying the expansion to increased production metrics for Samarco. Additionally, certain of the individual defendants signed certifications pursuant to the Sarbanes-Oxley Act of 2002 ("SOX") included in BHP's Form 20-F filings, which falsely represented that the Forms 20-F fairly presented the Company's financial condition and results of operations. These defendants include Chief Executive Officer ("CEO") Andrew Mackenzie ("Mackenzie"), Chief Financial Officer ("CFO") Graham Kerr ("Kerr"), and Kerr's successor as CFO, Peter Beaven ("Beaven") – all of whom were members of the Group Management Committee during their respective tenures as senior executives.

11. In truth, the problems plaguing Samarco's operations flatly contradicted the positive statements Defendants made throughout the Class Period, before the Fundão dam disaster occurred on November 5, 2015. In the immediate wake of the catastrophe, investors learned that Samarco had failed to implement a viable EAP and that the Fundão dam had longstanding and systemic structural defects. They also learned that Samarco had ignored repeated warnings regarding these issues, as evidenced by the Pristino Report and individuals and entities with knowledge of the Germano mining operations, including Pimenta de Avila and Fonseca. And given the extent of the problems, they learned that the Samarco iron ore production estimates were false and misleading, and without a reasonable basis, when made.

12. These revelations exposed the falsity of certain of Defendants' earlier Class Period statements, causing the trading price of the ADRs to decline in concert with exposure of the news.

Nevertheless, Defendants continued to perpetuate falsehoods regarding the severity of the disaster, the damage on the surrounding communities, and the fallout for both BHP and Samarco.

13. On November 16, 2015, nine days after the Fundão dam's collapse, Mackenzie stated that the mudflow from the collapse did not contain any toxic heavy metals and was "relatively inert." This representation was false and misleading, and otherwise without a reasonable basis when made. Indeed, on November 25, 2015, the United Nations reported that multiple independent scientific tests, commissioned by Brazilian authorities after the collapse, found dangerous levels of toxic heavy metals in the Rio Doce River – a finding that Brazil's Environment Ministry confirmed after the Class Period, when it fined Samarco \$41.6 million for damage to protected areas contaminated by toxic heavy metals from the mudflow.

14. In response to the November 25, 2015 revelation that the tailings contained toxic heavy metals, the trading price of the ADRs declined, inflicting further harm on BHP's unsuspecting public investors.

15. Then, on November 30, 2015, BHP disclosed that the Brazilian government intended to commence legal proceedings against Samarco, BHP and Vale to recover clean-up costs and damages. As the Company confirmed, Brazil sought to force these entities to establish a fund of approximately \$5.2 billion, which would provide for environmental recovery and compensation over a period of 10 years. The same day, Brazilian President Dilma Rousseff blamed the disaster on the "irresponsible action of a company," adding: "We are severely punishing those responsible for this tragedy." In response to this news, the trading price of the ADRs dropped further.

16. Yet the end of the Class Period did not mark the end of the fallout for BHP resulting from the Samarco incident. In February 2016, two Samarco executives – CEO Ricardo Vescovi de Aragão ("Vescovi") and Director of Operations Kleber Luiz de Mendonca Terra ("Terra") – were

charged with “qualified homicide,” Brazil’s equivalent of involuntary manslaughter, for their roles in the dam collapse.

17. In May 2016, the Brazilian Federal Public Prosecution Service (“Federal Prosecution Service”) commenced legal proceedings against BHP, Vale and Samarco seeking to recover approximately \$43 billion for social, environmental and economic compensation relating to the Fundão dam collapse.

18. Most recently, on June 10, 2016, Brazil’s federal police formally accused Samarco of deliberate misconduct in relation to the collapse, concluding, among other things, that Samarco had ignored clear warning signs that the Fundão dam was at risk of failing for years.

19. In the wake of these issues, BHP and Vale announced the cessation of mining operations at Samarco for at least the remainder of 2016, and Samarco has stopped paying a dividend to BHP and Vale. BHP was also caused to abandon its much vaunted progressive dividend policy – a drastic action that defendant Mackenzie assured Class Period investors would occur only “over my dead body.”

## **II. JURISDICTION AND VENUE**

20. The claims asserted herein arise under and pursuant to Sections 10(b) and 20(a) of the Exchange Act [15 U.S.C. §§78j(b) and 78t(a)] and Rule 10b-5 promulgated thereunder by the SEC [17 C.F.R. §240.10b-5].

21. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §1331 and Section 27 of the Exchange Act.

22. Venue is proper in this District pursuant to Section 27 of the Exchange Act and 28 U.S.C. §1391(b). Many of the acts charged herein, including the preparation and dissemination of materially false and misleading information, occurred in substantial part in this District.

23. In connection with the acts alleged herein, Defendants, directly or indirectly, used the means and instrumentalities of interstate commerce, including, but not limited to, the mails, interstate telephone communications and the facilities of the New York Stock Exchange (“NYSE”).

### **III. THE PARTIES**

24. On June 14, 2016, the Court appointed Lead Plaintiffs to lead the prosecution of this action. As set forth in the Certifications previously filed in this action, which are incorporated by reference herein, Lead Plaintiffs purchased certain of the ADRs during the Class Period and were damaged thereby.

25. As set forth in the Certification filed herewith, Plaintiff Crumpley purchased certain of the ADRs during the Class Period and was damaged thereby.

26. Defendant BHP describes itself as a leading global resources company and is among the world’s top producers of major commodities, including iron ore. The Company operates under a “Dual Listed Company” structure, with parent companies BHP Ltd. and BHP Plc operated as a single economic entity by a unified board and management team. The economic and voting interests in BHP resulting from holding one BHP Ltd. share are equivalent to that resulting from holding one BHP Plc share. Accordingly, holders of the ADRs effectively have an interest in a single group that combines the assets, and is subject to the liabilities, of BHP Ltd. and BHP Plc. Throughout the Class Period, the ADRs of BHP Ltd. and BHP Plc were listed on the NYSE under the ticker symbols “BHP” and “BBL,” respectively (as such ADRs are sometimes referred to herein), with SEC filings jointly issued on their behalf. Each ADR represents two ordinary shares of BHP Ltd. or BHP Plc, as the case may be. According to BHP’s annual report on Form 20-F for the fiscal year ended June 30, 2015, which was filed with the SEC on September 23, 2015 (the “2015 Form 20-F”), as of August 21, 2015, BHP Ltd. and BHP Plc had outstanding 173,200,830 and 82,212,682 ADRs outstanding, respectively.

27. Defendant Nasser has served as a director of BHP Ltd. and BHP Plc since June 2006 and as Chairman of their Board since March 31, 2010.

28. Defendant Mackenzie has served as CEO and as a member of the Group Management Committee since May 10, 2013. He has also served as a member of the Board since May 2013. He joined the Company in November 2008 as Chief Executive Non-Ferrous.

29. Defendant Beaven has served as CFO of BHP Ltd. and BHP Plc since October 2014. Previously, he was President of Copper, a position he held since May 2013, at which point he also became a member of the Group Management Committee, a membership he retained upon his promotion to CFO. Before that, he served in various executive roles at the Company, including as President of Base Metals, President of Manganese, and Vice President and Chief Development Officer for Carbon Steel Materials.

30. Defendant Kerr was CFO and a member of the Group Management Committee from November 2011 until October 1, 2014. He joined the Company in 1994 and, except for a two-year hiatus, served in various executive roles, including as President of Diamonds and Specialty Products. He serves as CEO and a director of South32 Limited (“South32”), a mining company spun out of BHP in May 2015.

31. Defendants Nasser, Mackenzie, Beaven and Kerr are referred to as the “Individual Defendants” and, together with the Company, as “Defendants.”

32. Because of the Individual Defendants’ positions with the Company, they had access to adverse undisclosed information about its business and operations, as detailed herein, via internal corporate documents, conversations and connections with other corporate officers and employees, attendance at management and/or Board meetings and committees thereof and via reports and other

information provided to them in connection therewith. They also had the ability, and exercised the ability, to control the nature and content of information that the Company disseminated.

33. It is appropriate to treat Defendants as a group for pleading purposes and to presume that the false, misleading and incomplete information conveyed in the Company's public filings, press releases and other publications as alleged herein are attributable to them. By virtue of their high-level positions with the Company, the Individual Defendants participated in the management of the Company, were involved in the day-to-day operations of the Company at the highest levels, and were privy to confidential proprietary information concerning the Company. As detailed herein, they were involved in drafting, producing, reviewing and/or disseminating the false and misleading statements and information alleged herein; were aware, or recklessly disregarded, that the false and misleading statements were being issued regarding the Company; and approved or ratified these statements, in violation of the federal securities laws.

34. As officers and controlling persons of a publicly-held company whose ADRs were traded on the NYSE, governed by the federal securities laws, the Individual Defendants had a duty to promptly disseminate accurate and truthful information on the Company's business, operations and prospects, and to correct any previously-issued statements that had become materially misleading or untrue, so that the market price of the ADRs would be based upon truthful and accurate information. As alleged herein, Defendants did not discharge this duty.

#### **IV. WITNESSES REFERENCED HEREIN**

35. Among the witnesses who provided sworn testimony to Brazilian prosecutors are the following individuals, each of whom gave statements which support an inference that Defendants knew, or recklessly disregarded, that serious problems existed at the Fundão dam during the Class Period, as detailed herein. A description of the accounts provided by these individuals is detailed below, and these accounts are discussed further herein.

(a) Wagner Milagres Alves (“Alves”), who gave testimony to the Prosecutor’s Office of the State of Minas Gerais on January 22, 2016, worked for BHP in Australia from 2003 to September 2012. In October 2012, Alves began working at Samarco as the mine planning manager and process engineer and, in October 2014, he became General Operations Manager for Mining at Samarco, which is his present position. As detailed herein, Alves testified concerning, among other things, that Samarco built a recess in the Fundão dam’s left abutment in order to address ongoing drainage problems with the dam, that no provision for the recess was included in the dam’s environmental permit, and that one of the piezometers used to monitor the dam continuously indicated an emergency situation in 2014 and 2015.

(b) Paulo Sergio Machado Ribeiro Filho (“Filho”), who provided testimony to the Environmental Conflicts Resolution Office for the Public Ministry of the State of Minas Gerais on November 30, 2015, began working at Samarco as an Environmental Analyst beginning in October 2013 and is a member of Samarco’s accident response team. As detailed herein, Filho testified concerning, among other things, that the Fundão dam had no audible alarm system and that he never received training on protocols in the event of a dam rupture.

(c) Germano Silva Lopes (“Lopes”), who gave testimony to the Environmental Conflicts Resolution Office for the Public Ministry of the State of Minas Gerais on November 30, 2015, and to the Brazilian Federal Civil Service on December 14, 2015, began working at Samarco as the General Manager of Structure Projects beginning in March 2011, which is his current position. As detailed herein, Lopes testified concerning, among other things, that the Fundão dam was projected to receive approximately 20% more tailings waste in 2015 than in the period 2011 to 2014, that the dam was experiencing drainage and other problems before and during his tenure with Samarco, that an emergency action plan at Samarco was prepared in 2008 and was never updated or

revised, and that this plan did not require notifying the residents of Bento Rodrigues in the event of an accident or dam rupture.

(d) Pimenta de Avila, who provided testimony to the Environmental Prosecuting Attorney for the Velhas and Paraopeba River Basins on January 18, 2016, and subsequently gave numerous media interviews, was contracted by Samarco to be the designer and builder of the Fundão dam. Pimenta de Avila served in this role from 2007 until July 2012. Thereafter, beginning in November 2013, he was retained by Samarco as a consultant. As detailed herein, Pimenta de Avila testified concerning, among other things, that it was contemplated in 2007 that the Fundão dam would receive tailings waste from both Samarco and Vale mines, that the dam experienced severe drainage problems in 2009 and this information was communicated to the Samarco Board who subsequently authorized a design change to address this problem, that a deformation or “piping” caused problems at the dam in 2010 and 2011, that a September 2011 technical report he authored for Samarco warned serious problems could arise if the dam was expanded, that he identified several cracks in the dam in September 2014, and that he observed numerous other problems when he visited the dam again in December 2014.

(e) Daviely Rodrigues Silva (“Rodrigues Silva”), who provided testimony to the Environmental Conflicts Resolution Office for the Public Ministry of the State of Minas Gerais on November 30, 2015, and to the Brazilian Federal Civil Service on December 10, 2015, began working at Samarco in 2001 and is currently the Manager of Soil Science and Hydrogeology. As detailed herein, Rodrigues Silva testified concerning, among other things, that the Fundão dam experienced severe drainage problems in 2009 and that the dam experienced a deformation or “piping” in 2010.



(f) Euzimar Augusto da Rocha Rosado (“Rosado”), who provided testimony to the Environmental Conflicts Resolution Office for the Public Ministry of the State of Minas Gerais on November 30, 2015, began working at Samarco in February 1998 and is currently an Environmental Coordinator. As detailed herein, Rosado testified concerning, among other things, that production of iron ore at Samarco increased by about 30-40% in the year before the Fundão dam collapse as a result of the P4P Project being placed into operation.

(g) Gleison Alexandrino Souza (“Souza”), who provided testimony to the Environmental Conflicts Resolution Office for the Public Ministry of the State of Minas Gerais on November 18, 2015, is a mason who worked for a contractor that performed work on the Fundão dam, has lived in Bento Rodrigues for 31 years, and was in Bento Rodrigues when the Fundão dam collapsed. As detailed herein, Souza testified concerning, among other things, that he witnessed a crack in the Fundão dam in 2014 which had water flowing out of it, that everyone knew about the crack, that Samarco never conducted any training with the Bento Rodrigues community for emergency situations, and that no statements or warnings were issued to the community after the dam collapsed.

(h) Terra, who provided testimony to the Environmental Conflicts Resolution Office for the Public Ministry of the State of Minas Gerais on February 4, 2016, began working at Samarco in 1998. By December 2012, Terra had become Samarco’s Director of Operations, a role he held until he took a leave of absence beginning on January 21, 2016. In this role, Terra was a member of Samarco’s executive committee, and he routinely and regularly participated at meetings of the Samarco Board where he reported on, among other things, the status of Samarco’s tailings dams. As detailed herein, Terra testified concerning, among other things, that he was aware by mid-2012 that Vale had been depositing tailings in the Fundão dam, that he was aware in 2012 of

drainage problems with the dam, and that fixing these problems required budgetary approval from someone above his position. Shortly after providing his testimony, it was announced on February 24, 2016, that Terra, along with five other senior Samarco employees, would be prosecuted for “qualified homicide” charges (the Brazilian equivalent of involuntary manslaughter) due to their roles in the Fundão dam collapse.

36. In addition to the foregoing witnesses, other individuals with relevant knowledge about, among other things, BHP’s interest in Samarco, the Samarco Board, the status of the various investigations in Brazil relating to the Fundão dam collapse, the lack of an adequate emergency plan at Samarco, and the chemical composition of the mudflow from the Fundão dam collapse, include those individuals described below.

(a) Dr. Nikola Casule (“Casule”), a representative of Greenpeace, posed questions through proxies to defendants Nasser and Mackenzie at BHP Ltd.’s annual general meeting on November 19, 2015 (the “11/19/15 AGM”) concerning the Fundão dam collapse, which resulted in defendant Nasser admitting that BHP knew about the Pristino Report in 2013.

(b) Fonseca, director of RTI Consulting, was retained by Samarco in 2009 to create an emergency action plan for its mining units, including the Germano complex and the Fundão dam. As detailed herein, Fonseca provided information to journalists regarding, among other things, that he had designed a new emergency action plan for Samarco which would cost a mere \$1.5 million, would have given Samarco the ability to monitor its tailings dam on a second-by-second basis, and would have included training for employees and residents near the dam, but this plan was rejected by the Samarco Board for being too expensive.

(c) John Knox (“Knox”), the Special Rapporteur for the United Nations on human rights and the environment, announced on November 25, 2015, that, among other things, based on

independent scientific tests commissioned by authorities in Minas Gerais and Espirito Santo, the mudflow from the Fundão dam collapse contained elevated levels of toxic heavy metals such as arsenic, barium and manganese.

(d) Roger Lima de Moura (“Moura”), the head of the Brazilian Federal Police task force, provided information to journalists regarding, among other things, his belief that the Fundão dam collapse should not be characterized as an accident because it was caused by negligence from top executives at Samarco, and that prior to the collapse Samarco executives had discussed purchasing Bento Rodrigues so that it could relocate the village. As support for his statements, Moura cited to the results of a seven month investigation into the dam collapse conducted by Brazilian police. In addition, according to documents from the Brazilian Federal Civil Service, Moura was present at the December 9, 2015 testimony given by Rodrigues Silva, the December 14, 2015 testimony given by Germano Lopes, and when testimony was given by ten other Samarco employees on December 9 and 10, 2015.

(e) Carlos Eduardo Pinto (“Pinto”), a Brazilian state prosecutor, provided information to journalists regarding, among other things, his belief that the Fundão dam did not break by chance. In addition, according to documents from the Environmental Conflicts Resolution Office for the Public Ministry of the State of Minas Gerais, Pinto was present at the November 30, 2015 testimony given by Rodrigues Silva and the November 30, 2015 testimony given by Rosado.

(f) José Adércio Leite Sampaio (“Sampaio”), a Brazilian federal prosecutor, learned, according to *The Wall Street Journal*, that between 2012 and 2015, that the volume of tailings at the Fundão dam grew from 5 million cubic meters to 55 million cubic meters, an increase of approximately 1100%, and that several of the 50 piezometers in the dam’s walls indicated emergency levels of pressure and stress before the collapse.

(g) Baskut Tuncak (“Tuncak”), the Special Rapporteur for the United Nations on human rights implications on hazardous substances, announced on November 25, 2015, that, among other things, based on independent scientific tests commissioned by authorities in Minas Gerais and Espirito Santo, the mudflow from the Fundão dam collapse contained elevated levels of toxic heavy metals such as arsenic, barium and manganese.

37. The accounts of these witnesses are further described below, and collectively support the inference not only that the risks facing, and precarious condition of, the Fundão dam were well known at Samarco and to Brazilian authorities, but also to Defendants.

## **V. SUBSTANTIVE ALLEGATIONS**

### **A. Background of BHP**

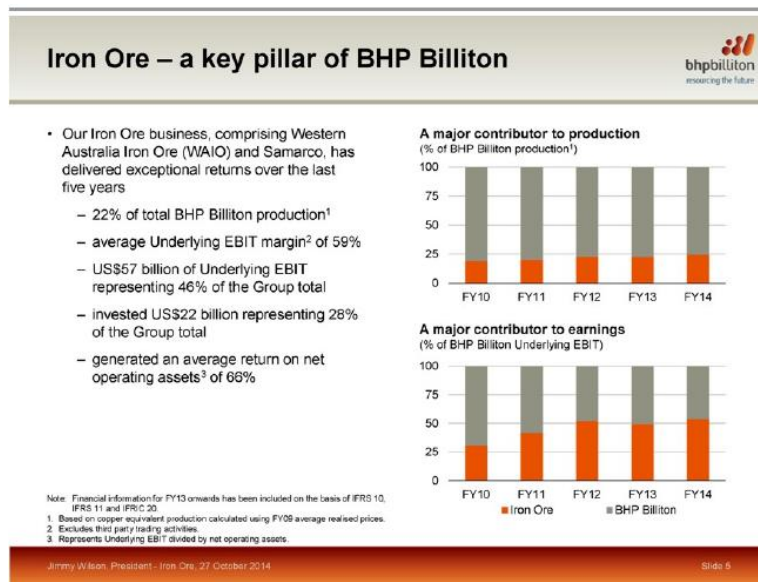
#### **1. The Importance of Iron Ore Production to BHP’s Operations**

38. BHP’s annual report on Form 20-F for the fiscal year ended June 30, 2014, which was filed with the SEC on September 25, 2014 (the “2014 Form 20-F”), the first day of the Class Period, explains that the Company has four businesses as part of its operating model, including iron ore. As set forth in BHP’s Sustainability Report 2014, filed with the SEC on Form 6-K on September 25, 2014 (the “2014 Sustainability Report”), the Company operates only two mining operations as part of its iron ore business: Samarco, which it jointly owns with Vale; and Western Australia Iron Ore (“WAIO”), in which it has an ownership stake of between 51% and 85% depending on the specific iron ore mining operations.

39. According to the 2014 Form 20-F, Samarco has proven iron ore reserves of 1,800 million tons (“Mt”), compared to 1,670 Mt for WAIO, and a reserve life of 39 years, compared to 16 years for WAIO. According to the 2014 Sustainability Report, of the fourteen iron ore, copper and coal mines in which BHP has a whole or partial interest, only Samarco is located in Brazil.

40. Iron ore is integral to the Company's revenue and profitability. According to the 2014 Form 20-F, in fiscal year 2014, iron ore accounted for \$21.356 billion of BHP's \$67.206 billion in revenues, approximately 31.8%, and was the largest contributor to BHP's revenues out of all the Company's businesses by over \$6 billion.

41. According to the 2014 Form 20-F, BHP is a global top three producer of Iron ore. Furthermore, during the Class Period, the Company characterized iron ore as a "key pillar of BHP," also calling it a major contributor to both production and earnings, as reflected in the October 27, 2014 presentation slide below:



42. In fiscal year 2014, BHP paid out \$6.5 billion in dividends to its investors. BHP pays a twice yearly dividend pursuant to its progressive dividend policy, which it implemented in 2003. BHP's progressive dividend policy is its pledge to investors not to decrease dividend payments at any six-month interval, regardless of the Company's earnings results. Since its implementation, BHP has repeatedly characterized this policy as the centerpiece of the Company's distinctive investor proposition.

43. In 2004, BHP's dividend was approximately \$0.22 per share. Through 2015, that number increased dramatically, with BHP's yearly dividend payment in 2015 totaling \$1.24 per share, an increase of approximately 500% in just eleven years. BHP's dividend payments in 2015 totaled nearly \$7.1 billion, representing an approximate 9.2% increase from the total dividend of \$6.5 billion in 2014. According to the 2014 Form 20-F, the "progressive base dividend is the minimum annual distribution that a shareholder should expect and is expected to grow broadly in accordance with the growth of our business."

44. During the Class Period, Defendants consistently represented that preserving BHP's progressive dividend policy was of the utmost importance. In fact, during an investor conference call on August 25, 2015 (less than three months before the Fundão dam collapse), defendant Mackenzie told investors in response to a question from an analyst about the prospect of BHP abandoning its progressive dividend policy:

"[O]ver my dead body sounds a little strong but it's almost right. You shouldn't doubt the commitment of every single person who works for BHP Billiton to look after this progressive dividend after we've made sure our balance sheet's strong and our operations are safe."

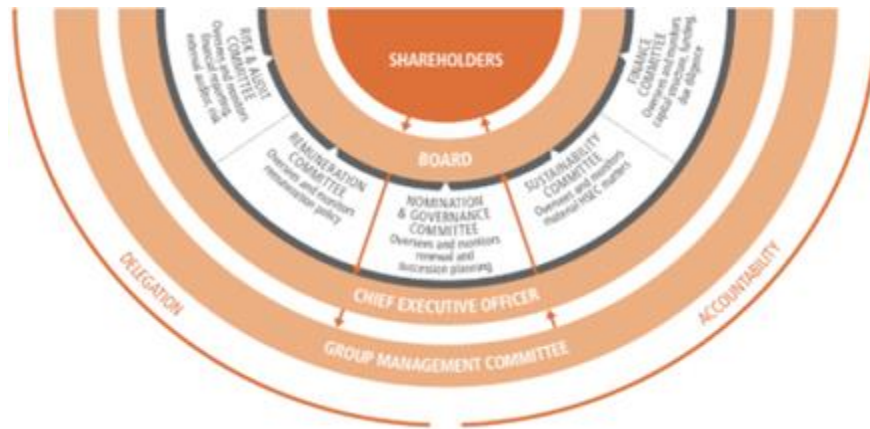
45. As a result of the incident at Samarco, BHP was ultimately forced to suspend its progressive dividend policy, which the decrease in iron ore production required.

## **2. BHP's Organizational Structure**

46. BHP is overseen by the Board, which, as of September 25, 2014, consisted of defendants Nasser and Mackenzie, as well as thirteen other directors. Defendant Nasser served as Chairman of the Board at all relevant times.

47. According to the 2014 Form 20-F, the Board, through various committees, interacts directly with BHP's CEO, defendant Mackenzie, regarding matters of corporate governance.

48. For his part, defendant Mackenzie interacts directly with BHP's Group Management Committee regarding matters of corporate governance. The following chart, adapted from the 2014 Form 20-F, details BHP's governance structure:



49. BHP's Group Management Committee is the primary executive leadership team for the Company. According to a March 18, 2014 letter to the SEC by BHP Head of Group Reporting Neil Beaumont, which was filed with the SEC on March 20, 2014 (the "3/18/14 Letter"), the Group Management Committee is BHP's chief operating decision maker and most senior executive body. According to the 3/18/14 Letter, the purpose of the Group Management Committee is to provide leadership to the Company, determining its priorities and the way it is to operate, thereby assisting BHP's CEO in pursuing the Company's corporate purpose. According to the 2014 Sustainability Report, the Group Management Committee "is a forum to debate high-level matters important to the Group and to ensure consistent development of the Group's strategy."

50. The 3/18/14 Letter explains that the Group Management Committee is established by the CEO. During the Class Period, it was comprised of approximately twelve members, including defendants Mackenzie, Beaven and Kerr, and James Wilson ("Wilson").

51. As detailed in the 3/18/14 Letter, upon his appointment as CEO in May 2013, defendant Mackenzie made several changes to the Group Management Committee's composition,

including appointing defendant Beaven to the Group Management Committee. As of May 2013, defendant Kerr continued as a member of the Group Management Committee in his role as CFO. It was not until October 2014, when defendant Kerr resigned as CFO due to his upcoming appointment in May 2015 as CEO and a director of South32 (a new mining company formed through a spin-off of BHP assets, described above), that he left the Group Management Committee and Beaven assumed the role of CFO (and continued to serve on the Group Management Committee).

52. In May 2013, defendant Mackenzie also appointed Wilson to the Group Management Committee. Mackenzie added Wilson to replace Marcus Randolph (“Randolph”), who was, at the time, a member of BHP’s Group Management Committee. Wilson, who formerly reported to Randolph, began directly reporting to defendant Mackenzie following Randolph’s departure.

## **B. Background of Samarco**

### **1. Samarco’s Business and Formation**

53. Samarco is based in Belo Horizonte, Brazil, which is located in the Brazilian state of Minas Gerais. Samarco owns and operates iron ore mines and iron ore processing facilities in and around the municipalities of Bento Rodrigues and Mariana, which are also located in Minas Gerais. Samarco also owns and operates pellet processing facilities and a port located in the municipality of Anchieta, which is located in the Brazilian state of Espírito Santo, the state adjacent to Minas Gerais, which borders the Atlantic Ocean.

54. Samarco’s main mining complex is known as the Germano complex, which consists of two mines, three beneficiation plants, three slurry pipelines used to move tailings and other materials, and three tailings dams – the Fundão Dam, the Santarem Dam, and the Germano Dam – to store the waste materials created by the iron ore mining process. Conveyor systems are used to extract iron ore and transport it from the mines. Iron ore beneficiation then occurs in concentrators, where crushing, milling, desliming and flotation processes produce iron concentrate. Concentrate



leaves the concentrators as slurry and is pumped through pipelines to pellet plants in Anchieta, where it is processed into pellets. The iron ore pellets are then heat treated and stored in a stockpile yard before being shipped out of Samarco's port.

55. Samarco was formed in 1973 by S.A. Mineração da Trindade ("SAMITRI") and Marcona Corporation, with SAMITRI owning 51% and Marcona Corporation owning 49%. In 1977, Marcona Corporation was sold to Utah International and became Utah Marcona Corp. In 1978, Utah Marcona Corp. was sold to General Electric.

56. In 1984, BHP purchased Utah Marcona Corp. from General Electric and thus acquired its 49% stake in Samarco. In 2000, Vale purchased SAMITRI. Shortly thereafter, BHP and Vale conducted a shareholder reorganization of Samarco which resulted in joint ownership of Samarco by BHP and Vale. Each of BHP and Vale holds a 50% interest in Samarco.

## **2. Samarco's Organizational Structure**

57. Given its ownership structure, Samarco is operated by an eight-member board of directors comprised of four representatives of each of BHP and Vale (two active directors each and two alternate directors each).

58. During the Class Period, the principal BHP executive on the Samarco Board was Wilson, BHP's President of Iron Ore and a member of the Group Management Committee. Wilson, who joined the Samarco Board in 2012, served as Chairman of the Samarco Board during 2014 and as Vice President of the Samarco Board during 2015. Serving as alternate directors for BHP during the Class Period were Margaret Beck, BHP's Vice President of Finance for the Iron Ore business, and Sérgio Consoli Fernandes ("Fernandes").

59. Prior to the Class Period, BHP had two regular directors on the Samarco Board: Wilson; and Randolph, former BHP Chief Executive of Ferrous & Coal, who also served as a member of the Group Management Committee. Randolph served as Chairman of the Samarco

Board in 2012 and as its Vice President during first half of 2013. Wilson replaced Randolph as Vice President of the Samarco Board for the remainder of 2013 upon Randolph's departure from BHP.

60. Concurrent with Wilson's promotion to the Group Management Committee, Randolph was replaced as a regular director on the Samarco Board by Jeffrey Mark Zweig ("Zweig") in April 2013. Zweig served as BHP's Vice President of Strategy and Development in the iron ore business from February 2012 to late 2014. Following Zweig's departure from BHP in late 2014, at least as of the Samarco Board's meeting on April 15, 2015, BHP did not replace him with another regular director, leaving Wilson as BHP's sole regular director on the Samarco Board during the bulk of the Class Period. BHP proposed adding Antonino Ottaviano as a regular director in December 2014, but as of the Samarco Board's April 15, 2015 meeting, Ottaviano was not yet elected as a regular director.

61. According to Samarco's Report of Management and Financial Statements, dated December 31, 2014, the Samarco Board has the ultimate responsibility for directing and managing Samarco's business and mining activities. Specifically, the Samarco Board's "duties include establishing strategic guidance, approving business plans, investments and budgets, and monitoring the Company's performance. Other authorities of the Board include approving dividend distributions to shareholders and reinvestment, and deciding on changes to the capital structure." According to Samarco's Board of Directors' Report, dated December 31, 2012, the Samarco Board is also responsible for ensuring a yearly independent audit of Samarco, appointing Samarco's CEO, evaluating Samarco's executives, and guaranteeing the integrity of Samarco's management.

62. According to the Samarco Board's minutes from its December 4, 2013 meeting, in addition to serving on the Samarco Board, BHP executives also served on the four Samarco Board

committees responsible for overseeing Samarco's operations, including the Management Committee for the P4P Project, as follows:

- **P4P Project Management Committee:** responsible for, among other things, “support[ing] the Board of Directors and the Project team in making important decisions on the [P4P] project[,] review and monitor the key performance indicators for the [P4P] project, including results for safety, physical and financial progress and cost performance[,] analyze risk management, internal controls, compliance [emphasis in original] and related improvement plans[,] analyze external and internal audit reports and monitor the progress of the related action plans[,] analyze and approve changes in the scope, schedule, specifications, and/or budget, within approval limits[, and] review and advise the Board of Directors regarding requests related to changes in scope, schedule, specifications, and/or budget which exceed the Committee's approval limits.” BHP representatives: Fernandes and Guilherme Campos Ferreira (“Ferreira”).
- **Operations Committee:** responsible for, among other things, monitoring Samarco's “operational performance [related to] Health and Safety, environment and community, sales, production, costs, inventories, etc.[,]” as well as “technical evaluation of new resources” and evaluation and monitoring of capital projects. BHP representatives: Fernandes and Ferreira.
- **Finance and Strategy Committee:** responsible for, among other things, “defin[ing] parameters and monitor[ing]” Samarco's “strategic plan[,] annual and multiannual budget[, and] capital structure[,]” and “review internal and external audit reports and monitor the progress of the related action plans.” BHP representatives: Fernandes and Andre Cardoso.
- **Compensation Committee:** responsible for, among other things, “monitor[ing] the effectiveness of management in delivering results and executing strategies in relation to approved budgets/plans” and “defin[ing] and supervis[ing] the process of evaluating the CEO and senior executives. BHP representative: Wilson.

63. The Samarco Board minutes from December 4, 2013 through April 15, 2015, do not indicate that any of BHP's representatives were removed from, or added to, these committees during such time. The P4P Project Management Committee was disbanded at the December 10, 2014 Samarco Board meeting because the P4P Project concluded around that time.

64. The Samarco Board met at least three times each year, typically in April, August/September, and December. BHP executives, including at least Wilson and/or Randolph, attended every meeting with the exception of the afternoon session of the September 19, 2014

meeting (although Wilson was present at the morning session that day). According to the minutes of the various meetings, the topics discussed included, among others: (i) the P4P Project (4/4/12, 8/8/12, 12/7/12, 4/4/13, 8/14/13, 12/4/13, 4/2/14, 9/19/14 and 12/10/14 meetings); (ii) raising the elevation levels of the Fundão Dam and the Germano Dam (4/15/15 meeting); (iii) tailings storage, the ongoing risks associated with tailings storage, and the need for future tailings storage capacity (8/8/12, 12/7/12, 4/4/13, 12/4/13, 4/2/14, 9/19/14, 12/10/14, and 4/15/15 meetings); (iv) necessary operation and safety improvements (4/4/12, 8/8/12, 12/7/12, 4/4/13, 8/14/13, 12/14/13, 4/2/14, 9/19/14, 12/10/14, and 4/15/15 meetings); (v) the licensing of various mining operations and tailings storage facilities (12/7/12, 12/4/13, 4/2/14, and 4/15/15 meetings); (vi) shareholder audit results (12/7/12, 12/4/13, and 12/10/14 meetings); and (vii) the status of various other capital projects (4/4/12, 8/8/12, 12/7/12, 4/4/13, 8/14/13, 12/4/13, 4/2/14, 9/19/14, 12/10/14, and 4/15/15 meetings).

65. BHP, along with Vale, audited Samarco each year. The results of these audits were presented to the Samarco Board each year, whereupon the results were discussed by the Samarco Board and the proposed scope of the following year's audit was also discussed.

### **C. The Use and Known Risks in the Industry of Upstream Tailings Dams**

66. As part of the Germano complex, Samarco constructed and maintained three tailings dams, including the Fundão Dam. Prior to its collapse, Minas Gerais officials classified the Fundão Dam as Class III, meaning it had the greatest potential for environmental damage. The classification was warranted.

67. Tailings dams are generally constructed in stages, with embankments raised as mine and waste output increases. Because tailings may contain harmful elements used in mining and processing ore, it is exceedingly important to ensure that the tailings remain contained and do not contaminate the surrounding area and populace. In fact, Samarco has acknowledged that its primary challenge is to safely dispose of the tailings resulting from iron ore processing at its sites in Brazil.

68. Tailings ponds are a notoriously dangerous way to manage and store tailings, as compared to dry stacking or other methods which eliminate the persistent risk of tailings breaches or contamination. In fact, a July 21, 2015 report, entitled “The Risk, Public Liability, & Economics of Tailings Storage Facility Failures,” identified an alarming trend in catastrophic tailings dam failures resulting from increased mining and production, driven by, among other things: (i) lower excavation and processing costs; (ii) the ability to process lower grades of material based on technological advances; and (iii) declining metal prices. As the report cautioned:

[M]any of the same features of modern mining that create economic feasibility in lower grades of ore also pose greater challenges for the management of mine waste and waste water. One of the manifestations of these challenges overall is a greater frequency of Very Serious tailings dam failures [*i.e.*, having a release of at least 1 million cubic meters, and/or a release that travelled 20 Km or more, and/or multiple deaths (generally  $\geq 20$ )] with significant levels of social and economic consequence, sometimes non remediable.

69. Tailings dams typically are built in sequential “lifts” over several years that increase the size and height of the dam throughout the life of the particular mine(s) it services. Typically, a base or starter dam is constructed and, as it fills with a mixture of tailings and water, is raised to accommodate additional waste. Materials used to raise the dam often include tailings themselves. These unique features lead to concerns over quality control in both design and construction.

70. The International Commission on Large Dams (“ICOLD”) described these concerns in a 2001 bulletin (*Tailings Dams, Risk of Dangerous Occurrences, Lessons Learnt from Practical Experiences*, Bulletin 121, ICOLD, 2001), as follows:

Causes (for dam failures) in many cases could be attributed to lack of attention to detail. The slow construction of tailings dams can span many staff changes, and sometimes changes of ownership. Original design heights often are exceeded and the properties of the tailings can change.

\* \* \*

[Although] the technical knowledge exists to allow tailings dams to be built and operated at low risk, [] that accidents occur frequently because of lapses in the

consistent application of expertise over the full life of a facility and because of lack of attention to detail.

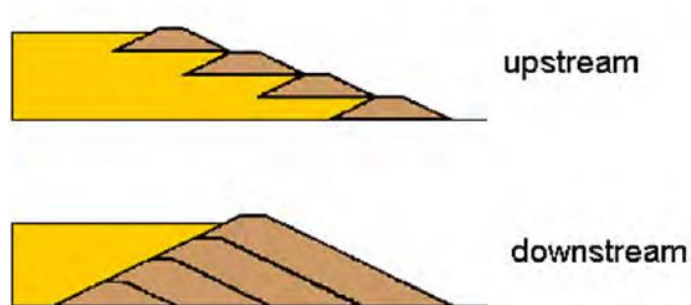
\* \* \*

By highlighting the continuing frequency with which (dam failures) are occurring and the severe consequences of many of the cases, this Bulletin provides prima facie evidence that commensurate attention is not yet being paid by all concerned to safe tailings management.

\* \* \*

[T]he mining industry operates with a continual imperative to cut costs due to the relentless reduction in real prices for minerals which has been experienced over the long term, plus the low margins and low return on capital which are the norm. The result has been a shedding of manpower to the point where companies may no longer have sufficient expertise in the range of engineering and operational skills which apply to the management of tailings.

71. Tailings dams typically are built using “upstream” design and construction – a cheaper, less reliable, and less stable method than “downstream” construction, which is the safest, but most expensive method. Upstream tailings dams are far less secure because they rely on the stability of the tailings themselves as a foundation for the construction. The following graphic, taken from a study by David M. Chambers and Bretwood Higman, *Long Term Risks of Tailings Dam Failure*, dated October 2011 (the “Chambers and Higman Study”), shows the difference in construction methods:



72. In an article entitled “Mining Dams Grow to Colossal Heights, and So Do the Risks,” dated April 5, 2016 (the “4/5/16 Article”), *The Wall Street Journal* explained how upstream construction works:

“Upstream” design . . . involves letting the tailings closest to the dam dry out. These dry tailings are then used as the foundation for new levels, raised by plowing earth or tailings into successive embankments. As it requires the least amount of bulldozing, the upstream method is the least expensive way of building a tailings dam and was employed by Samarco.

73. According to the 4/5/16 Article, some countries, including Chile, have banned the upstream tailings dam design. BHP is mentioned in the 4/5/16 Article as having confirmed that the biggest and tallest tailings dam it has across the 14 mines it operates, in whole or in part, is at its Escondida copper mine located in Chile, the largest copper mine in the world. According to the 2014 Sustainability Report, BHP also has an interest in another copper mine in Chile, called Pampa Norte. Presumably, BHP does not employ the upstream tailings dam design at these mines.

74. Upstream dams built on tailings are more susceptible to liquefaction, a physical phenomenon in which the strength and stiffness of soil is reduced by either dynamic forces (like an earthquake or other rapid loading) or static forces (such as slope instability or the buildup of water pressures unrelated to dynamic forces). According to Davies, McRoberts, and Martin, the authors of a paper on the history of tailings dam failures entitled “Static Liquefaction of Tailings – Fundamental and Case Histories,” static liquefaction likely is the most common cause of tailings dam failures.

75. The 4/5/16 Article reported that “[s]cientists say the typical culprit for tailings accidents is too much water, which can cause earthen dams to liquefy.” The following graphic reprinted from the *Wall Street Journal* illustrates the risks of upstream tailings dams:

**Tailings Dam Risks****Water**

Water is a tailings dam's worst enemy. If it saturates the dam walls or the tailings beneath an upstream dam, the whole structure can liquefy and slide. Wetter tailings also travel farther and faster if they escape, causing more destruction.

**Weak Foundation**

An undetected layer of clay or silt beneath a tailings dam can prove disastrous. In addition to being less sturdy than rock or sand, such materials drain poorly, allowing water to silently infiltrate the dam.

**Rate of Rise**

Upstream tailings dams should be raised slowly, to allow the beach time to dry and consolidate enough to support a new level of the dam. But this requires a level of discipline that can test mining companies.

76. Tailings dams are not designed to hold substantial amounts of water. Indeed, water is the number one enemy of tailings dams, as too much water makes tailings dams unstable and greatly increases the risk of collapse. Accordingly, great care must be taken not to raise the level of an upstream dam too quickly to ensure that the tailings used to construct the “lifts” have sufficient time to dry out before additional lifts are added. If the tailings do not dry sufficiently, the risk of a collapse increases significantly.

77. When iron prices fall (as during the Class Period), mining companies must increase production and reduce costs and capital expenditures to remain profitable. One way to increase production is to mine increasingly lower-grade ores. Mining lower-grade ore, however, produces more tailings waste, creating the need for bigger and taller tailings dams. Not surprisingly, as the size of tailings dams increases, so too does the incidence and risk of catastrophic failures. Simply stated, the bigger and taller the tailings dam, the greater the risk of failure – and the greater the harm, if it fails.

78. Experts estimate that tailings dams fail at a rate ten times greater than conventional dams. According to the Chambers and Higman Study, on average, between 2001 and 2011 there was one tailings dam failure every eight months. There were two catastrophic failures in 2014: one that killed two people at a mine in Minas Gerais, near the Fundão Dam and the Germano complex; and another that occurred at the Mount Polley mine in Canada, resulting in one of the worst



environmental disasters in Canadian history. A report on Mining, Minerals and Sustainable Development, published by the International Institute for Environment and Development, concluded that tailings dams typically represent the most significant environmental liability associated with mining operations. According to the 4/5/16 Article, a consultant who has designed a number of very large tailings dams for mining companies was quoted as saying “[o]ur dams and dumps are among the highest-risk structures on Earth.”

79. The 4/5/16 Article also reported that a 2009 study of 42 years of accident data found that tailings dams fail much more frequently when commodity prices fall, suggesting a correlation with increased pressure to cut costs “once mines constructed on the basis of rising commodity prices are forced to operate with the reality of lower commodity prices.” According to the Chambers and Higman Study:

The mining industry operates with a continual imperative to cut costs due to relentless reduction in real prices for minerals which has been experienced over the long term, plus the low margins and low return on capital which are the norm. The result has been a shedding of manpower to the point where companies may no longer have sufficient expertise in the range of engineering and operational skills which apply the management of tailings.

80. According to the Center for Science in Public Participation, the rate of serious design failures in tailings dams is increasing. Nearly half of serious tailings dam failures in the last 70 years occurred in the 20 years between 1990 and 2009. The increasing rate of design failures in tailings dams is directly related to the increasing number of tailings dams larger than 5 million cubic meters – the capacity needed to allow lower grades of iron ore to be extracted economically.

81. Underscoring the extensive, known risks in the mining industry associated with upstream tailings dams is a push by Brazilian legislators to ban such dams in the wake of the Fundão dam collapse. The proposal would toughen supervision and maintenance at existing waste storage facilities in Minas Gerais and ban construction of upstream tailing dams.

**D. Samarco's P4P Project Increased Demands on its Tailings Dams**

82. Beginning in early 2013, nearly three years before the Fundão Dam collapsed, the price of iron ore plummeted. In February 2013, iron ore traded at \$154.64 per dry metric ton. By November 2015, when the Fundão Dam collapsed, the price had sunk to \$46.16, a decline of more than 70% and the lowest price that iron ore had traded at since early 2008.

83. As detailed above, as iron prices plummet, the pressure on mining companies to increase production and cut costs grows enormously. BHP was not immune to these pressures, and responded by dramatically increasing production to record levels.

84. Before the Class Period, Samarco approved the P4P Project, a \$3.5 billion expansion project, known as the Fourth Pellet Plant Project, consisting of the construction of a fourth pellet plant, a new concentrator and a third slurry pipeline. BHP and Vale were each responsible for funding \$1.75 billion of the total project price.

85. As of September 2014, the P4P Project was complete, with the first pellet production from the P4P Project having begun months earlier, in March 2014. The P4P Project dramatically increased Samarco's iron ore pellet production capacity – from 22.3 Mtpa to 30.5 Mtpa, an increase of nearly 37%. Accordingly, the P4P Project provided Samarco with the ability to significantly ramp up iron ore pellet production beginning in late 2014.

86. Additionally, the P4P Project was completed significantly under budget. The 2014 Form 20-F indicated that the final cost of the project was \$3.2 billion (\$1.6 billion BHP share), meaning that BHP and Vale were each able to save \$150 million against the approved budget of \$3.5 billion.

87. Despite the cost savings associated with the completion of the P4P Project, the P4P Project did not contemplate the design or implementation of a new tailings dam to accommodate the

explosive growth in production at Samarco – or the equally explosive growth in tailings waste that would result.

88. According to testimony provided by Rosado, a Samarco environmental coordinator responsible for the environmental management of ongoing projects, production of iron ore at the Germano complex increased by “around 9 million tons” in the last year before the collapse, an increase of approximately 30-40% over the previous year. Rosado confirmed that this increase was because “a ‘fourth pelletizing [plant]’ was placed into operation,” *i.e.*, the P4P Project.

89. According to testimony provided by Lopes, the general manager of structure projects at Samarco, the Fundão dam was projected “to receive around 18 million cubic meters” of tailings waste in 2015, approximately 20% more than in the period between 2011 and 2014.

#### **E. The Risks Posed by Samarco’s Tailings Disposal and Storage Practices**

##### **1. The Samarco Board Frequently Discussed Tailings Issues**

90. Handling the excess waste resulting from Samarco’s increase in production, and the corresponding risk posed by overtaxing Samarco’s tailings dams, was a principal topic of concern for the Samarco Board both before and during the Class Period. These issues were discussed extensively at meetings of the Samarco Board, as reflected in minutes taken at those meetings. Yet BHP – whose representatives served on the Samarco Board – consciously or recklessly disregarded the risks posed by this increase in tailings and Samarco’s failure to implement a viable plan to handle the increase in tailings.

91. According to the August 8, 2012 minutes of a meeting of the Samarco Board, the Samarco Board “reiterated the importance of the projects related to the tailings storage facilities, and it recommended that Samarco prioritize efforts to resettle the communities near the tailings dams.” At that same meeting, the Samarco Board requested that Samarco’s management “include specific plans for the tailings dams (covering the activities related to communities in the area).” Wilson,

Randolph, Vescovi, Samarco's CEO and a member of Samarco's executive committee, and Terra, Samarco's Director of Operations from 2012 to January 2016 and also a member of Samarco's executive committee, were present at this meeting.

92. According to Brazilian newspaper *Estadão*, the federal police investigation report uncovered internal Samarco communication system, including, in pertinent part, on August 15, 2012, when Terra informed Lopes that "shareholders want to remove people from Bento in any possible way . . . We will have to perform a thorough case study. Including simulation of a rupture of the current structure. To see which would be the real damage . . . ." According to *Estadão*, federal police believed Samarco considered purchasing the Bento Rodrigues village, but concluded that it would be faster and easier to build a new tailings dam. Samarco ultimately did neither.

93. According to the December 7, 2012 Samarco Board minutes, Terra presented an overview of Samarco's tailings dams to the Samarco Board, including, among other topics, "dam management and risk control." In response to this presentation, the Samarco Board "stressed that the tailings facilities are critical (including continuous management/improvement of installations already in existence and needed expansions), and it recommended that Samarco maintain its focus on the design and implement of the tailings process as a matter of priority." Wilson, Randolph and Vescovi were also present at this meeting.

94. According to the April 4, 2013 Samarco Board minutes, Terra provided an update on Samarco's tailings disposal plan and "stress[ed] the related risks and the mitigation actions[.]" In response to this update, the Samarco Board "stressed the importance of continuing with the studies on alternative tailings facilities[.]" Wilson and Vescovi were also present at this meeting.

95. According to the December 4, 2013 Samarco Board minutes, Terra presented "detailed information about the tailings disposal system[.]" In response to this presentation, the

Samarco Board “acknowledged the progress made, stressing, however, that tailings are still a point of considerable concern, particularly regarding the future tailings storage capacity.” Wilson and Vescovi were also present at this meeting.

96. According to the September 19, 2014 Samarco Board minutes for the morning meeting, Vescovi presented the “main premises and projected results of [Samarco’s] Five-Year Plan, noting the importance of the investments in tailings disposal.” In response to this presentation, the Samarco Board approved the Five-Year Plan and recommended that management “resolve the limitations for tailings disposal at dams and dumps, making that the Company’s main priority[.]” Wilson and Terra were also present at this meeting.

97. According to the December 10, 2014 Samarco Board minutes, Vescovi reported to the Samarco Board that the forecast for cumulative production of iron ore pellets had decreased by 10.7% compared to the budgeted amount for the year due to increased operating costs. In response to this report, the Samarco Board “challenged the executives to seek substantially better results in 2015, mainly considering the negative conditions forecast for the market in 2015, delivering the results promised in the budget is essential.” Wilson and Terra were also present at this meeting.

98. At the same meeting, the Samarco Board stressed that, after safety, “cost reduction should be the main management focus in 2015.” With respect to tailings dams, the Samarco Board reiterated “the concern over the risk related to the tailings disposal and sanitary landfill projects, and the impacts of the amounts of capital needed on the results of the company[.]”

99. According to the April 15, 2015 Samarco Board minutes, Terra reported that production for 2015 was in line with the budget through February 2015 and that the pelletizing plant from the P4P Project had reached its planned capacity. Wilson and Vescovi were also present at this meeting.

100. At the same meeting, the Samarco Board approved the execution of a project to raise the elevation of the Fundão dam immediately. The Samarco Board also approved an additional raise of the Fundão dam's elevation in August 2015 so long as the required environmental license was issued in the intervening period, as the Samarco Board expected would happen.

## **2. Vale's Contract with Samarco Allowed it to Use the Fundão Dam**

101. Samarco was not only contending with the substantial increase in tailings caused by the P4P Project, but it also was filling the Fundão dam with waste from Vale's nearby Alegria mine. On December 21, 2015, *The Wall Street Journal* reported that Brazilian prosecutors indicated they had records from Brazil's federal mining agency showing that tailings from Vale accounted for up to 28% of the tailings volumes of the Fundão dam.

102. Multiple Samarco employees and contractors testified that Vale dumped tailings from its mines into the Fundão dam. Even Terra, who regularly provided updates on the tailings dams to the Samarco Board, testified that: he "was aware that Vale S.A. deposited tailings at the Fundão Dam"; he "was informed of this fact by mid-2012"; and he was aware of the contractual relationship between Vale and Samarco providing for this arrangement. Further, Pimenta de Avila, a consultant for Samarco who was the original designer of the Fundão dam, testified he "was contracted from the beginning to design the Fundão dam to receive tailings from Samarco's Germano Complex and slurry from Vale S.A.'s Alegria Complex[.]"

103. The contract that allowed Vale to use the Fundão dam, entitled "Agreement to Use Tailings Dam," was initially entered into between Samarco and SAMITRI in 1989. The purpose of the agreement was to allow SAMITRI to use Samarco's tailings dams when disposing of tailings from the nearby Alegria mine.

104. Specifically, the agreement required SAMITRI to construct at its own cost a disposal system to transport tailings to Samarco's dams. The contract also required the implementation of

mechanisms to calculate and record the quantity of material placed in the dams, and for Samarco and SAMITRI to produce a joint report annually recording the quantity of such tailings dumped in the prior year.

105. Furthermore, the contract established hourly and monthly limits on the volume and weight of materials SAMITRI could dispose of in Samarco's tailings dams; provided that any agreement to permanently raise those limits by more than 10% must be set forth in a written addendum; and required SAMITRI to "share in the maintenance expenses of the current dam and construction and maintenance of new dams, as well as any environmental costs derived from the use of the SAMARCO dams, in proportion to such degree of utilization as shall occur[.]"

106. In 2000, when Vale acquired SAMITRI, it also acquired SAMITRI's rights under the contract. Because the Fundão dam did not exist when Vale assumed SAMITRI's obligations under the contract, Vale was required to share in the maintenance and construction of the Fundão dam in 2008. As a result, when the Fundão dam was constructed, BHP knew that Vale intended to utilize the Fundão dam to store tailings waste from the mining operations of both Samarco and Vale.

#### **F. The Fundão Dam's History of Serious Problems**

107. Pimenta de Avila designed the Fundão dam in 2006 and 2007. According to his testimony, since the Fundão dam was constructed in 2008 and inaugurated in 2009, it was plagued with serious problems.

108. For example, in 2009, one of the Fundão dam's main dykes experienced severe drainage problems. Specifically, rather than moving the water downstream away from the tailings, as it was supposed to do, the bottom drain damned the water which caused excessive pressure in the embankment near the Fundão dam's foundation. A subsequent investigation revealed that faulty construction had caused the drain to become obstructed. To rectify the problem, the original conceptual design was adjusted and a new design, with an alternative method for draining water,

required approval. Several Samarco employees responsible for the Fundão dam's operation confirmed the existence of this problem, including: (i) Lopes, the general manager of structure projects at Samarco, and (ii) Rodrigues Silva, Samarco's manager of soil science and hydrogeology.

109. Pimenta de Avila testified that the Samarco Board, including the BHP executives on the Samarco Board at that time, were informed of this problem and authorized the design change. He further testified that these changes and corrections were implemented between 2009 and 2010.

110. Shortly thereafter, in 2010, according to testimony from Pimenta de Avila, Lopes and Rodrigues Silva, a deformation or "piping" was noted in the Fundão dam's main gallery spillway on the right shoulder of the Dam. Spillways are passages or structures through which excess water in a dam is released. Piping is a serious problem that occurs when water exiting a tailings impoundment picks up soil particles and moves them out of a dam's foundation or embankment. The continued removal of soil particles causes channels or "pipes" to develop in the dam's walls or foundation. If these channels or pipes become big enough to connect to the free-standing water in the reservoir, large flows can develop, leading to a complete dam failure. According to Pimenta de Avila, this problem was caused by an excessive decant within the dam's main spillway, which caused tailings to flood through a concrete joint at the point of the greatest decanting.

111. In 2011, a similar problem occurred in the Fundão dam's secondary gallery (on the left side of the dam). Both Pimenta de Avila and Lopes testified that a sinkhole occurred in the tailings beach, caused by a break in a concrete joint in the secondary gallery. Pimenta de Avila testified that an investigation ultimately showed that the design change necessitated by the initial drainage problem in 2009, and a misalignment between the original construction and the changed design, caused these additional problems. A specialized company brought in to examine the problem, Noh Engenharia, proposed a solution that involved reinforcing the galleries. But because



that solution would have limited the elevation that the Fundão dam could reach with tailings waste, thereby reducing its capacity, this solution was not implemented. Instead, the galleries were plugged and deactivated so that the Fundão dam could be raised yet again. Lopes testified that by plugging the main and secondary galleries, “it became necessary to build a new overflow system.”

112. Around this time, according to a September 2011 Technical Report for Samarco regarding the Fundão dam that was authored by Pimenta de Avila, Samarco wanted to expand the dam by extending it to a valley adjacent to a waste dump at a neighboring Vale mine. Pimenta de Avila explained in his report that, in order to safely expand the Fundão dam in the manner requested, the axis and geometry of the dam would have to be modified. He also expressed the concern that the proposed expansion would interfere with drainage at the adjacent Vale mine, and concluded that surface flows from the adjacent Vale waste dump could negatively impact the Fundão dam.

113. Notwithstanding Pimenta de Avila’s concerns, the expansion went forward and the axis and geometry of the Fundão dam were changed significantly, both to implement the requested expansion and to solve the ongoing drainage problems plaguing the dam. Pimenta de Avila, whose contract was not renewed when it expired in 2012, played no role in the change and thus could not have signed off on the modifications, but was engaged as a consultant to Samarco beginning in December 2013 and thereafter ascertained that these changes had occurred in January 2014. Aerial photos of the Fundão dam from 2011 and 2013, used by Brazilian prosecutors in certain depositions of Samarco employees, show the significant change in its geometry during this time period:



114. Terra confirmed that he “was informed at the end of the year 2012, that there would be a change made in the Fundão Dam’s axis (retreat)[.]” that he “was informed that the retreat would be necessary due to a problem in the secondary gallery[.]” and that because there was no “budgetary autonomy for plugging the secondary gallery . . . it was necessary to have pertinent authorization from other hierarchical bodies due to the amount involved[.]” Terra further confirmed that, in response to these drainage problems, the “reduction of placement of tailings at the Fundão Dam was not presented to [Terra] as an alternative to proceeding with the change to the dam’s axis[.]”

115. According to Alves, another part of the solution to the ongoing “piping” and drainage problems was to build a recess in the Fundão dam’s left abutment, which was in the process of being raised. Alves was employed by BHP from 2003 to September 2012 and then began working for Samarco in October 2012. By October 2014, Alves had become the general manager for Samarco, a position that included, among other responsibilities, monitoring and inspecting tailings dams. Alves admitted that no license was obtained for construction of the recess, and that there was no provision for the recess in the environmental permit for raising the Fundão dam.

116. When shown satellite images of the Fundão dam’s modified axis and geometry, Pimenta de Avila testified that the “modified condition of the Dam’s axis requires strict monitoring of the water level conditions within the tailings in order to check for liquefaction risk conditions[.]” He also testified that the original operating manual recommended that changes not be made to the

Fundão dam's geometry for safety reasons, but that if changes to the geometry were made, then the stability analysis should be revised. Again, that recommendation was not followed, as the Fundão dam's geometry was changed without revising the stability analysis.

117. The Fundão dam continued to experience serious problems. Lopes testified that there were water upsurges in the embankment near the left shoulder of the Fundão dam in 2013. Upsurges can cause significant saturation in the embankments, which in turn can lead to liquefaction and collapse.

118. In September 2014, fourteen months before the collapse, Pimenta de Avila, in his role as a part-time consultant to Samarco, performed six inspections of the Fundão dam and identified several serious risks. The most significant risk involved the beginning of a break in one of the Fundão dam's retreat dikes. Pimenta de Avila identified several extended cracks running parallel to the crest of the dike, as well as signs of movement at the foot of the slope. As he later testified, "the most relevant risk situation . . . on the September 4, 2014 visit" was "the beginning of a break in the retreat dike, evidenced by the occurrence of extended cracks parallel to the crest of this dike combined with signs of movement at the foot of the slope of this retreat[.]" He also identified liquefaction as a likely cause of these cracks, testifying further that "the geometry of the cracks characterized a vast area with movement typical of sliding which very probably would have been caused by the occurrence of liquefaction involving foundation tailings from the retreat dikes[.]"

119. As Pimenta de Avila later told *The Wall Street Journal*, in an article dated January 17, 2016, he informed Samarco executives of his belief that these cracks were the beginning of a rupture. According to his testimony, Pimenta de Avila made three recommendations to protect against liquefaction: (i) installing a buttress or reinforcements designed to take into account the likely liquefaction of the dike's foundation; (ii) installing piezometers along the wall at least ten

meters below the foundation to monitor water pressure and saturation; and (iii) daily monitoring of the piezometers' readings and, if the readings indicated saturation in the foundation, drilling pumping wells to reduce the saturation level to guarantee the Fundão dam's stability.

120. According to his testimony, Pimenta de Avila visited the Fundão dam again in December 2014 and recommended additional stability tests, using stricter safety coefficients. When he later inquired about the results of the recommended stability tests, he was told the results had been lost because the "computer's hard drive had burned up[.]" In response, he reemphasized the importance of performing the tests, and urged that the tests be made a priority. He testified that he "never received any feedback or request for clarifications about his reports." He also testified that he reviewed the consulting reports prepared by the company responsible for the stability reports for the Fundão dam (a Brazilian company called VogBR) and "verified that his recommendations produced in 2014 were not considered by any consulting company." He also noted that "the results for the piezometers, the installation of which had been recommended in the retreat area, were not found in the reports produced by [the consultant], nor were these results and the risks inherent to them taken into consideration when preparing the document that attested to the stability of the Fundão dam[.]"

121. As it turns out, there was no need for Pimenta de Avila to inform anyone at Samarco of cracks in the Fundão dam in September 2014 or thereafter, because Samarco executives already knew. According to Brazilian newspaper *Estadão*, the federal police investigation report uncovered messages from Samarco's internal communication system, including one on August 29, 2014, at 3:56 p.m., in which Terra advised Vescovi that "some cracks in the massive where the course was deviated appeared at Fundão." The implication of this communication was that cracks had appeared in 2014, where the geometry of the Fundão dam had been changed earlier (in 2012).

**G. BHP Ignored Repeated Warnings About the Fundão Dam**

122. In 2013, as the P4P Project was being implemented and production (and the corresponding tailings waste) was dramatically increasing, the decision was made to expand the Fundão dam rather than invest the capital necessary to build a new dam. In connection with the application to expand the Fundão dam and “revalidate” the license to operate it, the Minas Gerais State Prosecutor’s Office retained the Instituto Pristino, a not-for-profit environmental and geotechnical modelling institute affiliated with the University of Minas Gerais, to study the Fundão dam and prepare a report on its condition and whether the license should be renewed.

123. The Pristino Report, which is dated October 21, 2013, was published on the website of the State of Minas Gerais’ environmental regulator, Supram, shortly after its completion. The four technicians who prepared the Pristino Report warned of serious risks at the Fundão dam, and recommended that the license not be renewed unless a number of conditions were met.

124. For example, the Pristino Report warned that the Fundão dam’s proximity to an adjacent Vale tailings pond posed serious risks that rising water levels, resulting from the natural flow of surface water, could cause several collapses in the Fundão dam’s walls, creating a massive flow of waste. The Pristino Report concluded that the structures never should have been adjacent to each other because of their different physical characteristics. The Pristino Report stated that these design defects had been noted in previous technical reports, and should have been included in the application for renewal. These were the same concerns that Pimenta de Avila noted in his September 2011 Technical Report, discussed above. Like Pimenta de Avila’s earlier report, the Pristino Report also recommended that studies on the possible impact of contact between the structures be undertaken.

125. In addition, the Pristino Report recommended that the following conditions be placed on renewing the license: (i) more frequent (less than one year between tests) geotechnical and

structural testing and monitoring of the Fundão dam and adjacent dikes; (ii) the creation and presentation of a contingency plan for hazards or accidents that may occur, including evidence of the effectiveness of the contingency plan; and (iii) performance of a break analysis of the Fundão dam, which was supposed to have been delivered to regulators six years earlier and which, the Pristino Report noted, was of “extreme importance to ensure the security and integrity of the environment.”

126. Ultimately, these conditions were not imposed on renewing the license and the recommended steps were not taken, causing the Minas Gerais State Prosecutor to abstain from voting to approve renewal of the license. Nonetheless, Supram renewed Samarco’s license for the Fundão dam on October 29, 2013.

127. At the 11/19/15 AGM, defendant Nasser admitted that BHP knew about the Pristino Report in 2013. Specifically, at the 11/19/15 AGM, Greenpeace representative Dr. Casule used proxies to question defendants Nasser and Mackenzie directly over the collapse. As reported in a November 23, 2015 article by *SNL Metals & Mining Daily*, the following exchange took place between defendant Nasser and Casule:

Questions were raised as to why the Samarco mine was allowed to remain in operation after safety concerns were flagged in the Instituto Pristino report.

“On behalf of all of those affected and of the people of Brazil, I ask since BHP subsidiary Samarco was alerted to the danger posed by this dam in 2013, why did Samarco allow operations to proceed?” Casule questioned.

However, Nasser disputed Casule’s argument that had the safety concerns raised in the report been addressed, BHP Billiton would have been able to prevent the most recent tragedy at the Samarco mine.

“I don’t agree with you on the Instituto Pristino report that came out in 2013,” he said. “I don’t think that issue is relevant here. We’ve looked at it, we looked at it back then, we’ve looked at it now – it’s an interesting and unfortunate circumstance that happened, but not related to this.”

128. Defendant Nasser's admission – "we looked at [the Pristino Report] back then" – is uncontroverted proof that BHP, up to the highest levels of the Board, knew about, and chose to disregard, the significant warnings concerning the Fundão dam set forth therein.

129. The next warning came in September 2014, when Pimenta de Avila performed six inspections of the Fundão dam, as discussed above. Pimenta de Avila memorialized the results of three of these inspections in reports, and concluded that liquefaction was a likely cause of cracks in the wall of the dam. As Pimenta de Avila later related, as reported in an article dated February 28, 2016 by the *Australian Broadcasting Corporation*, the collapse of the Fundão dam could have been prevented. He further stated that "[i]f the observations show that the water level is rising, they have to drill wells and pump out to lower the water level. With that condition, I am convinced you would not have liquefaction there."

130. Testimony from Souza, the Bento Rodrigues resident who worked for a contractor at the Fundão dam in 2014, corroborates Pimenta de Avila's testimony about cracks in the Fundão dam at that time. According to Souza's testimony, he saw a crack in a "corner" of the dam in 2014 out of which "water was flowing." He further testified that "everybody knew that the crack was there[.]"

131. According to the *Australian Broadcasting Corporation*, Brazilian state police believe the principal cause of the Fundão dam collapse was Samarco's ramped-up production, conducted via the P4P Project, in an effort to offset plunging iron ore prices. The same article quotes Brazilian state prosecutor Pinto as stating: "A dam doesn't break by chance . . . Instead of planning a new dam, with a new structure, [Samarco] looked for a patchwork solution."

132. The conclusion that the P4P Project increased production at the expense of safety is corroborated by other media reports. According to Brazilian newspaper *Jornal ES Hoje*, while the P4P Project was being implemented, Samarco decreased its budget for geotechnical areas up to 29%.

According to Moura, “This was the area responsible for maintenance of the dam, *i.e.*, the mining company produced more, and instead of monitoring more, it fired part of the technical team.” Moura further stated that Samarco’s plans for 2016 called for reducing expenses again by up to 38%, and that Samarco had authorization to expand the Fundão dam even higher, up to 940 meters.

133. According to *The Wall Street Journal*, Brazilian federal prosecutor Sampaio learned that between 2012 and 2015, when the P4P Project was being implemented and began fully operating, the volume of tailings at the Fundão dam grew from 5 million cubic meters to 55 million cubic meters, an increase of approximately 1100%. Yet, according to the *Australian Broadcasting Company*, Brazilian police investigating the collapse discovered that, while the volume of waste being pumped into the Fundão dam increased in 2014 and 2015, the volume of water drained from the dam actually decreased. According to a February 25, 2016 article from the *Australian Financial Review*, a decrease in water drained from a tailings dam is problematic because “[i]f the tailings have not fully dried and settled before being introduced to large volumes of water then dam integrity could be threatened because the volume of tailings saturated water becomes unsustainable.”

134. Another warning came from the piezometers that Samarco had bored into the Fundão dam’s walls to measure the water pressure and saturation of the soils that comprised the walls. As explained above, when soil walls like those at the Fundão dam become saturated, they lose their ability to withstand dynamic or static stresses and the risk of the wall liquefying and collapsing increases dramatically. According to a November 24, 2015 article in *The Wall Street Journal*, Sampaio said that several of the 50 piezometers in the Fundão Dam’s walls indicated “emergency” levels of pressure and stress before the Fundão dam collapsed.

135. Former BHP employee and current Samarco employee Alves testified that one of the piezometers “continuously indicated an emergency situation in 2014 and 2015[.]” Alves further



testified that the data from the piezometers was collected weekly, not daily as Pimenta de Avila urged as part of his recommendations made in connection with his September 4, 2014, review of the Fundão dam.

136. These warning signs, which accumulated over a number of years, were knowingly disregarded or outright rejected by Samarco and its co-owners, BHP and Vale – both of whom had representation on the Samarco Board, and which confirmed receipt of some of the most significant warnings, such as the Pristino Report.

#### **H. Samarco's Inadequate Emergency Action Plan**

137. Despite the Samarco Board's recommendation on August 8, 2012 "that Samarco prioritize efforts to resettle the communities near the tailings dams" – thus acknowledging the danger that the dams posed to the nearby communities – an inadequate EAP was in place at Samarco at the time of the Fundão dam's collapse over three years later.

138. In 2009, Samarco retained RTI Consulting and Fonseca to create an EAP for its mining units, including the Germano complex and its tailings dams. In interviews with journalists, Fonseca explained that he was hired because an independent audit of Samarco's EAP had concluded that it did not conform to international technical rules of safety and the audit "considered the company's emergency plan 'a joke[.]'" Among other deficiencies, the EAP that Samarco had in place prior to retaining Fonseca provided for no audible alarms or other viable warning system to alert residents of towns downhill from the tailings dams. Likewise, Fonseca attended "a 'laughable' training program" at Samarco, where, as a safety drill, people were positioned along the tailings dams themselves; if the tailings dam collapsed in a real-world scenario, those people would have instantly perished.

139. Fonseca designed a new proposed EAP to address these and other deficiencies that would have cost a mere \$1.5 million – a fraction of the \$3.289 billion in revenue that Samarco

earned in fiscal year 2014, and of the cost-savings associated from completing the P4P Project under budget. Fonseca's proposed EAP included: (i) installing a telemetric system to identify structural risks; and (ii) developing a contingency plan to rescue neighboring communities in case of an accident. The telemetric system would have provided Samarco with structural reports on its tailings dam every second. The contingency plan would have included training and preparation for Samarco employees who worked near the tailings dams and nearby residents. Fonseca believed that second-by-second monitoring of tailings dam structures using telemetric systems was the best way to coordinate safety actions in the event of an accident.

140. According to Fonseca, the Samarco Board rejected RTI Consulting's proposed plan because it was too expensive. Fonseca confirmed that Samarco ignored the telemetric system and contingency plan recommendations from his proposed plan and continued to use an inadequate EAP.

141. Samarco employees confirmed that its EAP lacked any ability to protect Samarco's workers or the nearby communities in the event of a tailings dam breach. For example, Lopes testified that the EAP was prepared in 2008 and was never updated or revised. Moreover, Filho, a member of Samarco's accident response team for the dams at the Germano complex, testified that the Fundão dam had no audible alarm system and that the only training he received on how to respond to an accident at the Fundão dam was to "consult the [EAP], and to take the actions that were the responsibility of the environment team in it[.]" Filho further testified that he had been involved in only one prior training session, which "consisted only in basic guidance on the [EAP] and information where to check documents that might be relevant in an emergency situation." Filho "never participated in any drill for a situation in which the dam ruptures" and "is unaware of any training or meeting held with the fire department, civil defense, or divisions of the department of the environment on the [EAP] at the dams[.]"

142. The EAP had no mechanism for notifying residents in the towns directly below the Fundão Dam in the event of an emergency. Lopes testified that the EAP “did not stipulate any type of notification to the district of Bento Rodrigues or to the district of Paracatu de Baixo[.]” both of which are located directly below the Fundão dam. Lopes confirmed that emergency drills conducted in 2013 and 2014 were done only for Samarco’s own teams and did not include off-site entities. Lopes did not participate in a drill in 2015, and could not say whether one was conducted.

143. Residents of Bento Rodrigues also confirmed that Samarco had no training or warning system in place. According to testimony provided by Souza – a mason who worked on the Fundão dam, had lived in Bento Rodrigues for 31 years, and was in Bento Rodrigues when the Fundão dam collapsed – Samarco “never conducted any training with the community for emergency situations[.]” Souza further testified that Samarco “did not issue any statements or warnings to the community near the rupture[.]” and “that in meetings held between the company and the community, Samarco always stated that there was not any risk of a dam break and that if this were to occur the District of Bento Rodrigues would not be affected[.]” At the time of his testimony, Souza was living in a hotel, as he was displaced by the Fundão dam collapse.

#### **I. The Fundão Dam Collapses and Causes Unprecedented Devastation**

144. The Fundão dam was a ticking time bomb. Late in the afternoon of November 5, 2015, it began to leak. While Samarco employees futilely tried to reduce the volume of water in the dam to quell the leak, it was too late – the Fundão dam burst, unleashing a colossal torrent of mud and debris hurtling toward the villages below. Within minutes, Bento Rodrigues was overrun by the mudflow, destroying everything in its path. Because the EAP did not provide for a warning system or emergency training, Samarco employees and Bento Rodrigues residents had little time to flee. The below pictures show an aerial view of Bento Rodrigues from before the collapse, in July 2015, and after, in November 2015:



145. In addition, in a BHP presentation entitled “Samarco Update,” dated May 11, 2016, the Company included the following illustrations of how the mudflow from the Fundão dam collapse reached Bento Rodrigues and the path it took from Samarco to the Atlantic Ocean, as follows:



## Summary of event



Samarco update  
11 May 2016

4



## Rio Doce



Samarco update  
11 May 2016

6



146. In the end, the collapse led to the deaths of 19 people, including two children, and the mudflow traveled an astonishing 600 kilometers to the Atlantic Ocean, where it left a reddish-brown plume visible from space. The mudflow contaminated the Rio Doce River, which is used by 230 municipalities for drinking water by hundreds of thousands of Brazilians, killing aquatic life and

turning protected forest and habitat into a desert of mud. The mudflow in the Rio Doce was tested and found to contain higher than acceptable concentrations of heavy metals, including arsenic, barium and manganese.

147. By November 22, 2015, the mudflow reached the Atlantic Ocean in the Espirito Santo state, forcing cities to close down access to the beaches, and continues to impact the Atlantic Ocean today. The following photograph, dated December 3, 2015, shows the mudflow spilling into the Atlantic Ocean from the mouth of the Rio Doce River:



148. In commenting on the collapse, a Bento Rodrigues resident, Paula Alves, noted that the only silver lining was that the collapse occurred on a weekday afternoon. Had it occurred at night, “[e]verybody would have died . . . We wouldn’t know where to run to. We would have died while sleeping.” Duarte Junior, the mayor of the city that includes Bento Rodrigues, expressed a similar sentiment, stating that “[i]f the dam had collapsed at night, everyone would have died[.]”

149. The Fundão dam was as tall as a 30 story building and held enough tailings waste to fill 19 Dallas Cowboys stadiums. The collapse is widely considered to be the largest ecological disaster in the history of Brazil.

**J. Mudflow from the Fundão Dam Break Contained Toxic Metals**

150. In the wake of the Fundão dam break, BHP and Vale vehemently denied that the mudflow resulting from the release of the tailings was harmful.

151. On November 16, 2015, in response to an analyst's question about the "chemical composition of the tailings material and sediment," defendant Mackenzie expressly assured "that the tailings material is reasonably inert." He also stated: "It is not inherently active and does not contain things like heavy metals. It is slightly acidic but, with the dilution, is reasonably benign."

152. Defendant Mackenzie repeated this claim a few days later, stating to reporters after the 11/19/15 AGM, in pertinent part, that "[t]his is relatively inert material . . . it's iron ore, clay, a bit of silica that has been finely ground. So that makes it less challenging than it might otherwise have been to remediate[.]"

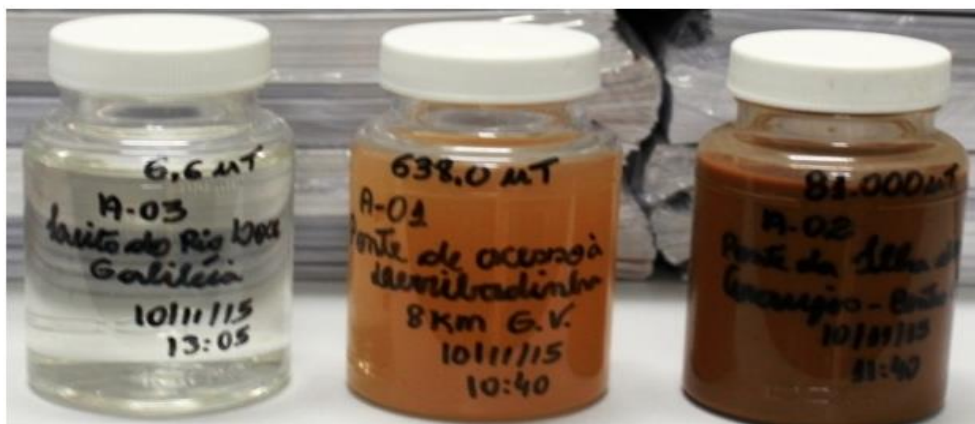
153. Vale executives also made similar representations publicly.

154. That these executives made these assurances was significant. For his part, defendant Mackenzie is a geoscientist and, in 2014, became a fellow of the world's premier scientific club, London's Royal Society, whose past fellows include Albert Einstein, Charles Darwin and Isaac Newton. Thus, investors would have reasonably assumed that he had a legitimate factual basis to make representations concerning the "relatively inert" nature of the mudflows. Investors would have also reasonably believed that Vale's executives knew what they were talking about, and had a legitimate factual basis, when making similar representations.

155. As set forth further below, however, these statements were quickly proven to be demonstrably false and misleading. During the trading day on November 25, 2015, the United

Nations issued a press release concerning the detection of toxic heavy metals in the mudflow resulting from the collapse of the Fundão dam. Specifically, Tuncak, the Special Rapporteur for the United Nations on human rights implications on hazardous substances, and Knox, the Special Rapporteur for the United Nations on human rights and the environment, reported that, based on independent scientific tests commissioned by authorities in Minas Gerais and Espírito Santo, the mudflow from the collapse contained elevated levels of toxic heavy metals such as arsenic, barium and manganese.

156. Among the tests referenced by Tuncak and Knox were laboratory analyses conducted by a Brazilian company known as Tommasi Laboratorio (“Tommasi”), which was commissioned by the water authority for the town of Baixo Guandu (approximately 430 kilometers east of Bento Rodrigues, located on the Rio Doce). The tests conducted by Tommasi took place at three locations within a 150-minute period on November 10, 2015, just five days after the collapse. Water sampled in Mariana appeared to show arsenic levels that were 2600 times higher than water sampled at the two other points, which were downstream. The tests also showed barium levels about 165 times higher in water from Mariana, and manganese levels more than 1000 times higher. Below is a photograph of the three samples taken by Tommasi:



*The three water samples analysed by Tommasi on behalf of SAAE in the Baixo Guandu council area, Minas Gerais.*

Photo: Baixo Guandu Council



157. A separate test conducted by the state water authority in Minas Gerais, COPASA, using water from the city of Governador Valadares on November 12, 2015 (about 350 kilometers northeast of Bento Rodrigues, located on the Rio Doce, and visible on the map included in BHP's May 11, 2016 presentation), showed levels of manganese, aluminum and iron that were higher than Brazilian legislated standards. Below is a photograph of the samples taken from this test:



Luciano de Bem Magalias presents his water samples from the River Rio Doce before and after the mining sludge [Fabio Nascimento/Al Jazeera]

158. In addition, the Institute for Water Management in Minas Gerais ("IGAM") conducted its own tests on the Rio Doce after the Fundão dam collapse. In total, IGAM found unacceptable levels of arsenic on one or more days between November 7 and November 12, 2015 at seven locations on the Rio Doce. IGAM's report on these tests, which is dated November 17, 2015, was publicly released on IGAM's website on November 24, 2015.

159. When asked specifically about defendant Mackenzie's statements from November 19, 2015 on the mudflow being "relatively inert," the United Nations' Tuncak responded that "I think the contamination speaks for itself, and it is very difficult for people to have access to what sort of other chemicals may be have been disposed of in that same tailings pond."

160. According to the U.S. Environmental Protection Agency ("EPA"), excessive levels of arsenic in drinking water has been linked to numerous cancers, including cancer of the bladder,

lungs, skin, kidney, liver and prostate, as well as paralysis and blindness. According to the Water Quality Association, excessive levels of barium in drinking water has been linked to difficulties in breathing, increased blood pressure, changes in heart rhythm, stomach irritation, brain swelling, muscle weakness, and damage to the liver, kidney, heart, and spleen. According to the EPA, excessive levels of manganese in drinking water have been linked to toxicity to the nervous system, producing a syndrome that resembles Parkinson's disease.

161. While BHP and Samarco sought to convince investors that the mudflow was not toxic, its actions in Brazil have told another story. In an *Al Jazeera* article dated June 14, 2016, a local resident confirmed that Samarco continues to deliver water to people and animals along the Rio Doce and still prohibits fishing in the river. Since some local residents also bathe in the Rio Doce, Samarco has also distributed big blue tanks of water to individual houses for this purpose and has discouraged river bathing.

#### **K. The Aftermath of the Fundão Dam Collapse**

162. The fallout from the Fundão dam collapse was severe and prolonged, continuing to adversely affect Samarco – and its co-owners, BHP and Vale – to this day.

163. On December 18, 2015, a federal Brazilian court in the state of Minas Gerais ordered BHP (along with Vale and Samarco) to fund a comprehensive recovery plan to remediate the environmental and societal harm the collapse caused, and also ordered that licenses and concessions for existing mines operated by BHP, Vale and Samarco be suspended. In doing so, the Brazilian court found that BHP's control of Samarco made it responsible as an indirect polluter:

In this case, the companies Vale S/A and BHP Billiton Brasil Ltda, as controlling entities of Samarco Mineração S/A, are not only the beneficiaries of the mining activities carried out by Samarco, but also co-responsible for the decisions made by the controlled company.

164. On December 22, 2015, the Company, in a news release filed as an attachment to Form 6-K with the SEC that same day, BHP provided an update on the Fundão dam collapse. Among other things, BHP disclosed that Group Management Committee member Dean Dalla Valle (“Dalla Valle”) had replaced Wilson as BHP’s liaison to Samarco. Dalla Valle assumed day-to-day responsibility at a Group Management Committee level for BHP’s response to the Fundão dam collapse. BHP also disclosed that the Company, Vale and Samarco had engaged New York law firm Cleary Gottlieb Steen & Hamilton LLP to conduct an external investigation into the cause of the collapse. This investigation, which the Company has never characterized as independent, is expected to publicly release its findings during 2016.

165. On January 19, 2016, *Bloomberg* reported that, due to the Fundão dam collapse, BHP reduced its fiscal year 2016 guidance for iron ore production.

166. On January 20, 2016, in a news release filed as an attachment to Form 6-K with the SEC that same day, BHP provided its operational review for the half year ended December 31, 2015. Among other things, BHP disclosed that, although Samarco’s mining operations have been closed since November 5, 2015, the Company would continue to ship iron ore from Samarco’s current stockpiles until exhausted, which was expected to occur that month.

167. On February 22, 2016, BHP held a conference call to discuss the pre-tax write-down necessitated by the Fundão dam collapse (the “2/22/16 Conference Call”). Defendants Mackenzie and Beaven participated on the call, and defendant Beaven stated, in pertinent part, that:

We’ve recorded an exceptional charge of \$1.2 billion before tax or \$860 million after tax. The figure is comprised of 3 significant items.

Firstly, a \$655 million charge or loss which is how it’s described in our accounts. This represents our 50% share of Samarco’s \$1.3 billion provision for costs relating to the dam failure.

Secondly, a \$525 million impairment to reduce the value of our investment to zero. Subsequent to recognizing our share of Samarco’s provision, we’ve assessed the

recoverability of our investment. The decision to write-off the carrying value does not reflect our views on the potential re-start of the mine but rather the uncertainty at this point in time surrounding the nature and the timing of future cash flows that BHP Billiton would receive.

Lastly, the tax effect. A \$330 million reduction to our deferred tax liabilities to reflect the reduction in undistributed earnings.

Separate to the exceptional charge, we are also outlining a number of contingent liabilities in our interim financial accounts. These contingencies include environment and community rehabilitation costs and legal claims where a potential obligation cannot be reasonably determined at this time. It's currently too early to say what the final cost may be.

Discussions with the authorities are ongoing and we are actively seeking to reach an agreement. Our dedicated team on the ground in Brazil remain committed to working closely with Samarco and Vale [*sic*] on response efforts as well as continuing to evaluate the financial impacts.

168. Also on the 2/22/16 Conference Call, defendants Mackenzie and Beaven announced that BHP was abandoning its progressive dividend policy, which was in place for over 13 years, cutting its first-half dividend by over 74%, from \$0.62 per share in the first half of 2015 to \$0.16 per share. Impacting the decision to dramatically change BHP's distinctive investor proposition was the \$1.2 billion pre-tax write-down related to the Fundão dam collapse.

169. In concert with the announcement of the impairment charge relating to the Fundão dam collapse and BHP's abandonment of its cherished progressive dividend policy, on February 23, 2016, in a news release filed as an attachment to Form 6-K with the SEC that same day, BHP announced that Wilson was departing the Company and the Group Management Committee effective March 1, 2016. According to *Bloomberg*, Wilson's exit was a surprise to investors, as he had been seen as among the potential successors to defendant Mackenzie.

170. On February 24, 2016, Brazilian state police recommended that "qualified homicide" charges be pursued against six senior Samarco employees. Qualified homicide is the Brazilian equivalent of involuntary manslaughter, and a conviction carries a prison sentence of 12 to 30 years.

According to the *Australian Financial Review*, those facing prosecution include Vescovi and Terra. Police also accused these Samarco employees, including Vescovi and Terra, of endangering public health by polluting the region's drinking water.

171. In addition, on February 24, 2016, the *Australian Financial Review* reported that state police in Minas Gerais concluded that the Fundão dam was too high, having been raised at an average annual rate of 20 meters over the past two years, despite the recommended rate of a maximum of 10 meters per year. State police further claimed that the Fundão dam collapse was caused by liquefaction, which should have been identified by routine monitoring of humidity levels in the dam.

172. On March 2, 2016, in a news release filed as an attachment to Form 6-K with the SEC on March 3, 2016, BHP announced that it had reached a settlement with federal and state Brazilian authorities stemming from the \$5.2 billion lawsuit first announced on November 30 (the "Settlement"). Among other things, BHP disclosed that the term of the Settlement is 15 years, that it will require Samarco to pay at least \$1.7 billion in the initial six years, and that to the extent Samarco cannot provide these funds, BHP and Vale will be jointly 50% liable to pay such amounts.

173. On March 12, 2016, Samarco's new CEO, Roberto Carvalho – who replaced Vescovi upon Samarco's learning in January 2016 that criminal charges were likely forthcoming – stated, in pertinent part, that "all [of Samarco's] focus is turning to the restart" of mining operations at the Germano complex. The *Sydney Morning Herald* reported that Samarco expects to restart production by the start of the fourth quarter of 2016, and expects iron ore production to be 19 Mtpa, down from its pre-collapse level of 30 Mtpa, an approximately 36% reduction – *i.e.*, almost exactly the amount of the production increase achieved after implementation of the P4P Project.

174. On May 4, 2016, in a news release filed as an attachment to Form 6-K with the SEC that same day, BHP disclosed that, despite the Settlement, the Federal Prosecution Service has commenced legal proceedings against BHP, Vale and Samarco for approximately \$43 billion for social, environmental and economic compensation relating to the Fundão dam collapse.

175. Brazil has a European-style civil law system that features four powers – the executive (*i.e.*, the Presidency), the legislature, the courts, and the Federal Prosecution Service. The Federal Prosecution Service is comprised of approximately 5,000 federal, regional and state civil servants who are charged with launching legal actions on the behalf of the Brazilian people. While nominally part of the Brazilian Attorney General – who signed the Settlement – the Federal Prosecution Service operates separately from the Brazilian government. The Federal Prosecution Service’s independence is guaranteed by the current Brazilian constitution. The Federal Prosecution Service can launch both criminal and civil actions against individuals, companies and governments at all levels. The reason for the existence of the Federal Prosecution Service is because of Brazilian citizenry distrust in the way that Brazil is governed.

176. While court ratification of the Settlement would resolve the \$5.2 billion lawsuit announced on November 30, because the Federal Prosecution Service did not join the Settlement, any ratification of the Settlement will not terminate, derail or defuse the lawsuit announced on May 4. The Federal Prosecution Service is able to run its lawsuit free from direction or disruption from the Brazilian state and federal governments that agreed to the Settlement.

177. On May 6, 2016, in a news release filed as an attachment to Form 6-K with the SEC that same day, BHP disclosed that a Brazilian federal court of appeal in Brasilia had approved the Settlement and that the Company would begin making payments pursuant to the schedule set forth in

the Settlement. According to *Mining.com*, the total value of the Settlement can reach as high as \$6.1 billion through 2030.

178. On May 21, 2016, the *Sydney Morning Herald* announced that the residents of Bento Rodrigues voted to have Samarco rebuild the town at a location 12 kilometers from the town's current location and away from the tailings dams at the Germano complex. Approximately 95% of the town's residents participated in the vote, with 92% voting in favor of relocation. Thus, the residents of Bento Rodrigues will now obtain what the Samarco Board knew all along was needed but decided not to implement – “that Samarco prioritize efforts to resettle the communities near the tailings dams.”

179. On June 10, 2016, Brazil's federal police formally accused Samarco of deliberate misconduct in relation to the Fundão dam collapse. The Brazilian federal police's official seven month investigation concluded, among other things, that Samarco had ignored clear signs that the Fundão dam was at risk of failings for years. Federal police added that Samarco skimmed on safety spending and focused instead on increasing production. In addition, police also accused eight Samarco executives of misconduct, although their names were not disclosed. According to Moura, head of the Brazilian federal police task force, Samarco was “more than negligent” and the collapse was not “an accident.”

180. According to Brazilian newspaper *Jornal ES Hoje*, the federal police investigation report referenced by Moura comprises more than 30,000 pages over 26 volumes and concludes that Samarco, through its directors and CEO, knew the Fundão dam had cracks, that control equipment was broken, and was aware of the risks to Bento Rodrigues posed by the dam. According to Moura, “we also found that the operations manual was outdated and risk manual had not been updated for over three years.” Even worse, according to Moura, Samarco had research showing how Bento

Rodrigues would be impacted in the event of a dam collapse. Moura stated that “[i]nvestigations also led us to find messages exchanged on the Samarco’s internal communication system in which the board was informed about the deficiencies of the dam.”

181. On June 22, 2016, Brazil’s Environment Ministry fined Samarco approximately \$41.6 million for damage to three protected areas resulting from the Fundão dam collapse. The Environment Ministry stated that three areas on the Atlantic coast in the state of Espirito Santo were contaminated by toxic heavy metals such as lead, copper and cadmium.

182. On July 1, 2016, in a news release filed as an attachment to Form 6-K with the SEC that same day, BHP disclosed that the Federal Prosecution Service had appealed the Brasilia federal court of appeal ratification of the Settlement and that, on June 30, 2016, the Superior Court of Justice in Brazil – equivalent to the United States Supreme Court – issued an interim order suspending the decision to ratify the Settlement. The effect of the interim order is to reinstate the \$5.2 billion lawsuit disclosed on November 30. The Federal Prosecution Service’s \$43 billion lawsuit was unaffected by the interim order.

183. As illustrated by, among other things, the departure of Wilson, the \$43 billion lawsuit brought by the Federal Prosecution Service, the reinstatement of the \$5.3 billion lawsuit, and the criminal charges that Vescovi and Terra are facing, the financial and legal fallout from the Fundão dam collapse promises to haunt BHP for many years to come.

## **VI. APPLICABLE SEC REGULATIONS**

### **A. Item 303 of SEC Regulation S-K [17 C.F.R. §229.303]**

184. Pursuant to Item 303 and the SEC’s related interpretive releases thereto, an issuer is required to disclose known trends, uncertainties or risks that have had, or are reasonably likely to have, a materially adverse impact on net sales or revenues or income from continuing operations. Such disclosure is required by an issuer in the management’s discussion and analysis section of



annual and quarterly filings, among others, such as Form 10-K and 10-Q filings for domestic issuers and Form 20-F filings for foreign private issuers.

185. In May 1989, the SEC issued an interpretive release on Item 303 (the “1989 Interpretive Release”), stating, in pertinent part, as follows:

Required disclosure is based on currently known trends, events and uncertainties that are reasonably expected to have material effects, such as: A reduction in the registrant’s product prices; erosion in the registrant’s market share; changes in insurance coverage; or the likely non-renewal of a material contract.

\* \* \*

A disclosure duty exists where a trend, demand, commitment, event or uncertainty is both presently known to management and reasonably likely to have material effects on the registrant’s financial condition or results of operation.

186. Furthermore, the 1989 Interpretive Release sets forth the following test to determine if disclosure under Item 303(a) is required:

Where a trend, demand, commitment, event or uncertainty is known, management must make two assessments:

(1) Is the known trend, demand, commitment, event or uncertainty likely to come to fruition? If management determines that it is not reasonably likely to occur, no disclosure is required.

(2) If management cannot make that determination, it must evaluate objectively the consequences of the known trend, demand, commitment, event or uncertainty, on the assumption that it will come to fruition. Disclosure is then required unless management determines that a material effect on the registrant’s financial condition or results is not reasonably likely to occur.

187. Item 303 required the disclosure of known risks and uncertainties to BHP presented by Samarco’s operations. The Company did not make such required disclosures in its Form 20-F filings during the Class Period, however.

188. During the Class Period, the absence of adequate safety precautions and protocols, coupled with the precarious structural condition of the Fundão dam, presented known risks and uncertainties for BHP in the face of increasing production capacity and demand for tailings storage

at Samarco. *First*, the absence of proper safety and emergency procedures and equipment meant that Samarco did not have viable preventative or emergency plans, which presented a risk or uncertainty for BHP – a 50% owner of Samarco – in the event that a catastrophic incident occurred, as was reasonably foreseeable. *Second*, the dangerous condition of the Fundão dam presented a risk or uncertainty for BHP because of the significant possibility that an ensuing incident would severely impact Samarco’s mining operations.

189. Moreover, the lack of adequate safety and emergency procedures and equipment was likely to adversely affect Samarco’s mining operations, and the immediate community and populace, if the Fundão dam failed – thereby impacting BHP’s iron ore production, dividends from Samarco, and revenues from iron ore mining. In turn, the dangerous condition of the Fundão dam was likely to adversely impact Samarco’s iron ore production – and, therefore, BHP’s interests in Samarco – if the dam failed as a result. Thus, the risks and uncertainties posed by these issues were reasonably likely to have a material effect on BHP’s financial condition and results.

190. In fact, in the wake of the Fundão dam collapse, Samarco was forced to cease all mining operations, without certainty as to when operations would resume, if at all. As a direct result, BHP was forced to announce, in July 2016, that it would record a charge of between \$1.1 billion and \$1.3 billion associated with the Company’s share of the estimate of Samarco’s funding obligations under the terms of an agreement to remediate and compensate for the impact of the failure. In disclosing the expected charge in a July 28, 2016 Form 6-K, BHP expressly acknowledged that the charge “reflects the ongoing uncertainty surrounding the nature and timing of a potential restart of Samarco’s operations.”

191. Further, given the circumstances facing Samarco during the Class Period, it would have been unreasonable for BHP management, including Defendants, to conclude that the presented

risks and uncertainties were not reasonably likely to occur. By the same token, even if BHP management, including Defendants, could not determine that these risks or uncertainties were likely to come to fruition, disclosure was still required because management could not possibly conclude that a material effect on BHP's financial condition or results was not reasonably likely to occur.

**B. Item 503(c) of SEC Regulation S-K [17 C.F.R. §229.503(c)]**

192. Item 503(c) of Regulation S-K, 17 C.F.R. §229.503(c), which governs disclosure of risk factors, requires an issuer to “provide under the caption ‘Risk Factors’ a discussion of the most significant factors that make the [securities] speculative or risky.” Specifically, Item 503(c) requires the issuer to “[e]xplain how the risk affects the issuer or the securities” and to “[s]et forth each risk factor under a subcaption that adequately describes the risk.”

193. In its Forms 20-F during the Class Period, the Company failed to disclose information regarding its exposure to Samarco's precarious condition that rendered an investment in the ADRs of the Company especially risky. Indeed, despite the Company's consistent disclosure regarding the actual and projected production capacity of Samarco's iron ore mining operations, the Company failed to disclose material facts regarding the lack of a viable EAP or monitoring instrumentation, or the precarious condition of the Fundão dam, which progressively worsened during the Class Period.

194. As detailed herein, the rapid expansion of Samarco's mining operations, coupled with increasing the height and capacity of the Fundão dam to accommodate elevated volumes of tailings and tailings contributed by Vale's nearby Alegria mine, increased the risk associated with Samarco's operations and, by extension, an investment in the ADRs.

**VII. MATERIALLY FALSE AND MISLEADING STATEMENTS  
MADE DURING THE CLASS PERIOD**

195. During the Class Period, Defendants disseminated materially false and misleading statements, and otherwise violated an obligation to disclose material information, concerning: (A)

the Company's concentration on, and commitment to, the health and safety of employees, residents and the communities in which its mining operations are located; (B) the adequacy and efficacy of the safety, risk management and monitoring practices, procedures and controls of the Company's mining operations; (C) the Company's compliance with local laws and regulations of the locales in which its mining operations are based; (D) Samarco's iron ore production capacity and projected performance; (E) the toxicity of mudflows resulting from the expulsion of tailings from the collapse of the Fundão dam; (F) the health and longevity of the Company's progressive dividend; (G) known uncertainties and material risks associated with Samarco's operations; and (H) the accuracy and completeness of the 2014 and 2015 Forms 20-F, filed during the Class Period, as represented in certifications pursuant to SOX.

**A. Statements Regarding the Company's Commitment to Health and Safety**

196. Throughout the Class Period, Defendants emphasized the Company's focus on, and commitment to, the health and safety of employees, residents and the communities in which its mining operations are located. As detailed below, these representations were made numerous times throughout 2014 and 2015, including in September, October and November of 2014 and in February, March, August, September and October of 2015.

197. As alleged further below, these statements were materially false and misleading when made because they favorably portrayed the safety practices and protocols of the Company's mining operations, when, in fact, Samarco did not have effective monitoring processes or instrumentation and increased iron ore production without regard for the safety of employees or the surrounding community.

**1. The September 2014 Statements**

198. The Class Period begins on September 25, 2014. On that date, BHP filed the 2014 Form 20-F, which was signed by defendant Kerr and certified under SOX by defendants Mackenzie and Kerr. The 2014 Form 20-F emphasized BHP's focus on safety, representing, in pertinent part, as follows: "The safety and health of our people and of the broader communities in which we operate are central to the success of our organisation."

199. In the Chairman's Review section of the 2014 Form 20-F, defendant Nasser also emphasized the Company's focus on safety, stating, in pertinent part, as follows:

Against the backdrop of external and organisational change, we continue to be guided by Our BHP Billiton Charter, which defines our values. Our first Charter value is Sustainability and we maintain a relentless focus on the health and safety of our people and the communities in which we operate. This year, we reported a record low total recordable injury frequency and no fatalities at our operated assets during the period. While this is an encouraging result, our efforts to protect the health and safety of our people will be unrelenting.

200. Likewise, in the CEO's Report section of the 2014 Form 20-F, defendant Mackenzie stated, in pertinent part, as follows:

While we are encouraged to have recorded a year without fatalities, we must never rest on past performance. We will continue to relentlessly identify and manage material health and safety risks to protect our people and communities.

201. In describing its "values" in the 2014 Form 20-F, the Company further emphasized its concentration on ensuring the safety of its mining operations, employees and the surrounding areas in which it operates, representing, in pertinent part, as follows:

In pursuing our strategy through all stages of the economic and commodity cycles, we are guided by Our BHP Billiton Charter values of Sustainability, Integrity, Respect, Performance, Simplicity and Accountability.

Our overriding commitment is to ensuring the safety of our people, and respecting our environment and the communities in which we work. This commitment informs everything we do and influences every aspect of our work.

202. Separately, the Company represented in the 2014 Form 20-F that its “approach to sustainability reflects our priority to put health and safety first, be environmentally responsible and provide support to our host communities.”

203. The September 2014 statements, which emphasized BHP’s focus on safety and sustainability, including a “relentless focus on the health and safety of our people and the communities in which we operate” and a “commitment . . . to ensuring the safety of our people, and respecting our environment,” were false and misleading when made. Contrary to the facts then existing, which confirmed that Samarco was increasing iron ore production at the expense of safety and the sustainability of the community, these statements provided a favorable portrayal of BHP’s mining operations that was not warranted.

204. In fact, by the time of the September 2014 statements, the Pristino Report – of which Defendants were aware – was nearly a year old. Moreover, as detailed above, design deficiencies plagued the Fundão dam from its inception, and yet were ignored. Furthermore, Pimenta de Avila testified that he identified significant structural problems during a September 4, 2014 inspection of Samarco’s mining operations. And yet the issues that afflicted the Fundão dam, which compromised the safety and integrity of Samarco’s operations, were never meaningfully addressed.

205. Nor did BHP disclose the precarious condition of Samarco’s operations, including the problems identified in prior inspections, to investors, or implement adequate monitoring systems or an EAP at Samarco.

206. Further, given that the P4P Project was completed during fiscal year 2014 (the period ending June 30, 2014), the Fundão dam and Samarco’s other facilities were under increasing stress. Vale continued to utilize the Fundão dam to dispose of tailings from its nearby operations, and the demands on the dam only continued to intensify with increased production as a result of the fourth

pelletizing plant whose construction was completed. The increased demands on the Fundão dam and Samarco generally were apparent to the Samarco Board and BHP, which closely monitored the status and cost of the P4P Project yet disregarded the implementation of appropriate safety and other measures designed to accommodate the increased production capacity and rise in resulting tailings.

207. Finally, by addressing the safety and sustainability of its mining operations, BHP assumed an obligation to accurately and completely disclose all information necessary to provide investors with a full understanding of the true condition of the safety and sustainability of those operations. Yet the Company failed to disclose information concerning the precarious condition of the Fundão dam, which could only worsen with time, an increase in iron ore production at Samarco, and the concomitant demands on the dam to store the rising tide of tailings. The failure to disclose this information also rendered the September 2014 statements materially false and misleading.

## **2. The October 2014 Statements**

208. Defendants continued to emphasize the Company's focus on health and safety the following month. In a speech delivered at BHP Plc's October 23, 2014 annual general meeting (the "10/23/14 AGM"), a transcription of which was filed as an attachment to Form 6-K with the SEC on October 24, 2014, Defendants continued to represent that safety was a foremost concern for the Company. Specifically, at the 10/23/14 AGM, defendant Nasser stated, in pertinent part, as follows:

Against a backdrop of external and organisational change, we continue to be guided by the BHP Billiton Charter, which defines our values.

Our first Charter value is Sustainability. This means putting health and safety first, being environmentally responsible and supporting our communities.

209. Defendant Nasser also represented that BHP had strong corporate governance and systems, which engender the "highest ethical standards, personal and corporate integrity and respect for others," as follows:

I talked earlier about volatility and risk. Our foundation for corporate resilience is built on a clear set of values as defined in Our Charter. Strong corporate governance and systems underpin the way we conduct business. We strive to foster a culture that values and rewards the highest ethical standards, personal and corporate integrity and respect for others. There are very few companies that have prospered for more than 130 years.

210. For his part, defendant Mackenzie, who also spoke at the 10/23/14 AGM, stated, in pertinent part, as follows:

Let me start with safety. Sustainability, our first Charter value, dictates that health and safety always comes first. At all times, in all places, in everything we do. So everyone goes home safely, every day.

Jac [Nasser] spoke of the improvement in safety performance that we made during the 2014 financial year. While we were encouraged by this result, recent events have again demonstrated that we can never rest on past performance. We were all deeply saddened by the fatal injury of one of our colleagues in Australia in September.

Keeping our people safe and healthy, across all our operations, matters more to me than anything else.

Sustainability also drives our focus on delivering enduring benefits to our environment and to our communities.

211. Subsequently, in an October 27, 2014 presentation (the “10/27/14 Presentation”), filed as an attachment to Form 6-K with the SEC on October 28, 2014, defendant Mackenzie identified safety as a “key theme,” representing: “Safety is paramount[.]”

212. Also in the 10/27/14 Presentation, Wilson stated: “We value safe and sustainable operations above all else[.]”

213. The October 2014 statements, which represented that BHP valued safety and sustainability above all else and across all operations, were materially false and misleading when made because they failed to accurately portray the dangerous condition of Samarco’s mining operations, which by then was well known to BHP. As noted above, Pimenta de Avila had identified liquefaction as a problem based on September 2014 inspections, and other warning signs had consistently presented themselves long before then.



214. Additionally, the increase in production at the Samarco facilities continued to place undue stress on the Fundão dam, which was slated to receive the increase in tailings resulting from such operations – as well as tailings from Vale’s own mining operations in the vicinity. Thus, at a minimum, the October 2014 statements concerning safety and sustainability were made without a reasonable basis, because the true condition of Samarco’s operations and the Fundão dam was well-known to the Samarco Board and BHP.

215. Accordingly, the October 2014 statements were false and misleading for the same reasons as the September 2014 statements, which concerned similar, if not identical, issues regarding safety and sustainability.

### **3. The November 2014 Statements**

216. In speeches delivered at BHP Ltd.’s November 20, 2014 annual general meeting (the “11/20/14 AGM”), transcriptions of which were filed as attachments to Form 6-K with the SEC on November 21, 2014, Defendants also represented that safety was a foremost concern for BHP. Specifically, defendant Nasser stated, in pertinent part, as follows:

Against a backdrop of external and organisational change, we continue to be guided by the BHP Billiton Charter, which defines our values. Our first Charter value is Sustainability. This means putting health and safety first, being environmentally responsible and supporting our communities.

217. For his part, defendant Mackenzie also recognized the importance of safety to the Company’s business at the 11/20/14 AGM, stating: “Let me start with safety. Sustainability, our first Charter value, dictates that health and safety always comes first. At all times, in all places, in everything we do. So everyone goes home safely, every day.” Building on this theme, he also stated: “Keeping our people safe and healthy across all our operations matters more to me than anything else. Sustainability also drives our focus on delivering enduring benefits to our environment and to our communities.”

218. Shortly thereafter, in a November 23, 2014 BHP Plc investor briefing and Company update, defendant Mackenzie represented: “Keeping our people and operations safe matters more to me and the team than anything else, because we view safety performance as a critical indicator of a business in control.” He further represented: “Sustainability, our first charter value, is also a key consideration for all of our investment decisions.”

219. In a November 24, 2014 presentation, filed as an attachment to Form 6-K with the SEC on the same date, defendant Mackenzie and other Company representatives made similar representations to those made in the 10/27/14 Presentation. Again, defendant Mackenzie identified safety as a “key theme,” representing: “Safety is paramount[.]” Likewise, defendant Beaven identified as a “key theme” the prospect that the Company “value[s] safe and sustainable operations above all else[.]” adding that it “ha[s] a strong and stable safety performance record underpinned by our focused approach to managing material risks[.]”

220. The November 2014 statements, which again emphasized safety and sustainability above all else, continued to engender the materially false and misleading impression that the Company’s mining operations incorporated adequate safety measures to protect employees and the communities in which those operations were located. Yet the Fundão dam suffered from design defects that were exacerbated by increased production at Samarco, and earlier testing of the dam had exposed significant cracks and other deficiencies in its structure.

221. Accordingly, the November 2014 statements were false and misleading for the same reasons as the September and October 2014 statements, which concerned similar, if not identical, issues regarding safety and sustainability.

#### **4. The February and March 2015 Statements**

222. Defendant Mackenzie continued to convey sentiments about safety similar to his 2014 statements during the February 23 and 24, 2015 half-year investor earnings calls for BHP Ltd. and

BHP Plc, respectively, variously stating: “[k]eeping our people and operations safe always comes first”; “the health and safety of our team must always come first, always”; “the health and safety of our people has to always come first”; and “although we are very pleased about these results, we achieve almost nothing if we don’t achieve it safely and sustainably, first.”

223. In a March 10, 2015 presentation entitled “Safely delivering exceptional returns” for BHP’s iron ore business, filed as an attachment to Form 6-K with the SEC on the same day, Wilson stated: “We value safe and sustainable operations above all else[.]”

224. On March 17, 2015, defendants Mackenzie and Kerr continued to emphasize BHP’s purported focus on safety during a presentation on the proposed demerger (or spinoff) of South32. As defendant Kerr, then-BHP CFO and CEO-elect of South32, stated when acknowledging that many members of South32’s management team previously worked at BHP:

The South32 senior management team brings with it extensive experience, with strong technical capabilities, and considerable in-country experience. Beyond its deep operational expertise, the team also brings the best of BHP Billiton’s values and skills, including a strong commitment to health, safety and our communities.

225. As with prior statements made during 2014, the February and March 2015 statements were materially false and misleading because they continued to portray the entirety of BHP’s mining operations as designed to promote safety and sustainability, notwithstanding the problems affecting Samarco’s operations.

226. Accordingly, the February and March 2015 statements were false and misleading for the same reasons as the September, October and November 2014 statements, which concerned similar, if not identical, issues regarding safety and sustainability.

## **5. The August 2015 Statements**

227. During the August 25, 2015 full-year earnings presentation for BHP Plc, defendant Mackenzie characterized the Company's "most important priority" as the "health and safety of our people." In addressing the five fatalities that had occurred during fiscal year 2015, he explained:

The health and safety of our people must come first and so across BHP Billiton we've interacted with the whole workforce to reaffirm our commitment to their safety and wellbeing, and to insist any work that is unsafe must be stopped.

It is vital that we all remain vigilant to make sure that all of our colleagues return home safely every day. Nothing matters more.

228. Defendant Mackenzie also assured investors that BHP was increasing production and lowering costs while maintaining a safe operating environment, representing, in pertinent part, as follows: "We've built a strong track record over the last three years and delivered productivity gains of over \$10 billion and we'll continue to deliver lower and lower costs as we run our operations more and more safely and more and more efficiently."

229. The August 2015 statements, which represented that the Company had "reaffirm[ed] [its] commitment . . . to insist any work that is unsafe must be stopped" and would "continue to . . . run our operations more and more safely," were materially false and misleading when made, because BHP knew or recklessly disregarded the dangerous condition of Samarco's mining operations and the Fundão dam. Moreover, as BHP knew or recklessly disregarded, the completed P4P Project had increased iron ore production at the expense of safety, particularly given the defects and problems at the Fundão dam. In fact, in April 2015, the Samarco Board approved plans to heighten the dam – an evident recognition of increased stress on the dam.

230. Accordingly, the August 2015 statements were false and misleading for the same reasons as the September, October and November 2014 and February and March 2015 statements, which concerned similar, if not identical, issues regarding safety and sustainability.

## **6. The September 2015 Statements**

231. On September 23, 2015, BHP filed the 2015 Form 20-F, signed by defendant Beaven and certified under SOX by defendants Mackenzie and Beaven. In the 2015 Form 20-F, Defendants continued to emphasize the Company's focus on safety, again representing: "The safety and health of our people and of the broader communities in which we operate are central to the success of our organisation."

232. Likewise, in the Chairman's Review section of the 2015 Form 20-F, defendant Nasser stated: "Your Directors and your management team are committed to a safe workplace." And in the CEO's Report section, defendant Mackenzie represented: "Safety is unquestionably my first priority, as it is for everyone at BHP Billiton. I am working with all the leaders of BHP Billiton and we have implemented a Company-wide program of engagement to make our workplaces safer than ever before."

233. In the 2015 Form 20-F, the Company also reiterated many of the same statements regarding safety and legal compliance contained in the 2014 Form 20-F, including the following:

- Our overriding commitment is to ensuring the safety of our people, and respecting our environment and the communities in which we work. This commitment informs everything we do and influences every aspect of our work.
- The health, safety and wellbeing of our people are central to the success of our organisation. Regardless of where our people are located or the type of work they undertake, we strive to create a working environment that is free from occupational illness or injury. Identifying and managing fatal and material risk is a critical component of our management approach. By understanding and managing our risks, we provide greater protection for our people, communities and assets.
- The health and safety of our people and of the broader communities in which we operate is central to every aspect of our business. Regardless of where our people are located, the area of the organisation in which they work, or the type of work they undertake, we strive to create an environment that is free from occupational harm.

234. The September 2015 statements, made in the context of the 2015 Form 20-F, repeated the materially false and misleading statements concerning safety and sustainability contained in prior filings and representations made during the Class Period.

235. Specifically, by representing that the “safety and health of our people and of the broader communities in which we operate are central to the success of our organisation” and “every aspect of our business,” and that “[s]afety is unquestionably my first priority,” BHP conveyed the impression that it placed safety and sustainability at the forefront of all of its mining operations. Indeed, the Company went so far as to claim that “[i]dentifying and managing fatal and material risk is a critical component of our management approach,” signifying that the Company monitored risks and had adequate protections in place to ensure safety and sustainability (discussed below).

236. In truth, however, the Company had not improved the condition of mining operations at Samarco. Rather, Defendants approved the financing and completion of the P4P Project to increase production at Samarco, without ensuring that Samarco had adequately addressed the myriad concerns continually expressed by field experts hired to assess those mining operations, including the Fundão dam. In this sense, Defendants placed profits over the protection of employees and the community in which Samarco operated, in contrast to the September 2015 statements to the contrary.

237. Accordingly, the September 2015 statements were false and misleading for the same reasons as the September, October and November 2014 and the February, March and August 2015 statements, which concerned similar, if not identical, issues regarding safety and sustainability.

## **7. The October 2015 Statements**

238. Subsequently, Defendants continued to represent that safety was a foremost concern for the Company. For example, in a speech delivered at BHP Plc’s October 22, 2015 annual general meeting (the “10/22/15 AGM”), a transcription of which was filed as an attachment to Form 6-K

with the SEC on the same date (the “October 2015 Form 6-K”), defendant Nasser stated, in pertinent part, as follows

Our Charter is the single most important guide to what we do and how we do it. Putting health and safety first is not only one of our Charter values, it is at the heart of everything we do.

239. Further, as a result of five fatalities of BHP employees during the year (discussed in the 2015 Form 20-F), defendant Nasser represented: “All of us at BHP Billiton are redoubling our efforts to make sure our people return home fit and well. Nothing is more important than the safety of our people.” At least one of these fatalities occurred on March 12, 2015 at joint venture BHP Billiton Mitsubishi Alliance (“BMA”), of which BHP owns 50%.

240. Likewise, at the 10/22/15 AGM defendant Mackenzie stated: “Health and safety are paramount to us.” At the same time, he acknowledged that the Company had a “challenging” year as a result of decreased demand, increased supply and lower commodity prices, explaining: “Operationally, demand growth slowed and supply grew. This lowered commodity prices across the board.” Yet the iron ore business’s increased efficiency purportedly resulted in a 31% decrease in unit costs, which “partly offset lower prices.”

241. The late October 2015 statements, which preceded the November 5, 2015 collapse of the Fundão dam by two weeks, were materially false and misleading because they continued to portray the Company’s mining operations in a positive light without disclosing the true condition of the Fundão dam. Indeed the condition of the Fundão dam had deteriorated to such an extent that it would fail only 14 days later. Not only were the October 2015 statements false and misleading for the same reasons as the previous Class Period statements (detailed above), but the temporal proximity of the collapse also supports an inference that the problems did not arise overnight, but were longstanding and well-known.

**B. The Adequacy of Safety, Risk Management and Monitoring Protocols**

242. In the 2014 Form 20-F, filed with the SEC on September 25, 2014, the Company represented that it had “appropriate controls in place” to manage and eliminate risks and crises.

Under the heading “Health and safety,” the Company stated, in pertinent part, as follows:

We recognise that the health and safety of our people comes first. This is core to Our Charter and to every aspect of our business. Our people are key to our long-term success and central to improving our HSEC [Health, Safety, Environment and Community] performance.

To understand, manage and, where possible, eliminate the risks in our business, we have appropriate controls in place and provide our people with appropriate training. While eliminating hazards through engineering or physical controls has a strong place in safety management, we understand it is only part of the solution.

Our operations are required to have systems in place to identify and effectively manage foreseeable crises and emergencies. This ensures our operations can deal with potential causalities, to limit harm and to safely return to full function as soon as possible.

Across our business, we undertake annual assessments to verify that critical controls are effective in managing each material risk. During FY2014, we maintained this focus, which included assessing whether the critical controls were being deployed as designed and to the standard required.

243. Subsequently, at the 10/23/14 AGM, a transcription of which was filed as an attachment to the 10/24/14 Form 6-K, defendant Nasser represented that “[s]trong corporate governance and systems underpin the way we conduct business.”

244. These representations continued in the CEO’s Report section of the 2015 Form 20-F, filed with the SEC on September 23, 2015, wherein defendant Mackenzie stated, in pertinent part: “we have implemented a Company-wide program of engagement to make our workplaces safer than ever before.”

245. Additionally, the Company represented in the 2015 Form 20-F that it had strengthened its evaluation and implementation of safety protocols, referencing a “Company-level safety intervention” implemented by the highest levels of management, as follows:



As part of our constant focus to eliminate fatal and other serious incidents, a Company-level safety intervention was initiated in FY2015. The safety intervention was launched across our business through a variety of methods, including workshops, team talks and surveys. Feedback was presented at our senior leaders' meeting in July 2015, identifying the key controls, programs, systems, processes and tools currently in place that require improvement and Company-wide adoption through focused leadership.

246. Furthermore, during the 10/22/15 AGM, defendant Mackenzie represented that the Company had increased its efforts to monitor and improve safety across all of its operations and in the communities in which it operates, describing these efforts as follows:

We've engaged tens of thousands of our people across the Company in discussions to upgrade their health and safety leadership, to make their workplaces healthier and safer; free from fatalities, serious injuries and long term health effects, including mental health. We will eliminate health and safety risks wherever possible, and provide greater protection for our people and communities.

247. The statements in the 2014 Form 20-F, 10/23/14 AGM, 2015 Form 20-F and 10/22/15 AGM concerning the nature, extent and efficacy of the safety and risk management controls and systems of the mining operations were materially false and misleading when made, given the absence of such controls and systems at Samarco's mining operations.

248. For example, the statement in the 2014 Form 20-F that "we have appropriate controls in place and provide our people with appropriate training" lacked a reasonable basis in fact, because Samarco did not employ appropriate monitoring controls or employee training programs. In fact, Fonseca attended a "laughable" emergency training program at Samarco that endangered employees by placing them in harm's way if an incident occurred. And Samarco refused to implement various safety measures designed to provide early warning of the potential failure of the Fundão dam.

249. The statement in the 2014 Form 20-F that "[o]ur operations are required to have systems in place to identify and effectively manage foreseeable crises and emergencies" also lacked a reasonable basis in fact, because there was no viable or effective EAP in place at Samarco. In fact, the Samarco Board had expressly refused to implement an appropriate EAP due to the cost –

estimated at a \$1.5 million, a miniscule fraction of the \$150 million in savings resulting from the under-budget completion of the P4P Project.

250. Moreover, the failure of the Fundão dam was reasonably foreseeable, given its history of problems and presence of structural design defects. Therefore, the “requirement” referenced in the 2014 Form 20-F – “to have systems in place to identify and effectively manage foreseeable crises and emergencies” – was illusory and not otherwise grounded in fact. Indeed, Samarco had no audible alarms or other viable warning system to alert residents to emergency situations involving its tailings dams, including the Fundão dam.

251. Likewise, the statement in the 2014 Form 20-F that “we undertake annual assessments to verify that critical controls are effective in managing each material risk” lacked a reasonable basis in fact, because, as detailed above, assessments at Samarco indicated that such controls were absent and not effective to manage operational risks associated with the mining operations. Further, several of the piezometers in the Fundão dam’s walls indicated “emergency” levels of pressure and stress shortly before the dam collapsed, yet the issue was never addressed.

252. Additionally, the statement in the 2015 Form 20-F describing a “constant focus to eliminate fatal and other serious incidents” was also materially false and misleading when made, because Samarco’s operations – which BHP monitored, influenced and directed via its representation on the Samarco Board – did not have adequate safety or risk management controls or programs in place. Rather, as detailed herein, it was only a matter of time before the Fundão dam failed.

253. Finally, the statements in the 10/22/15 AGM that BHP “will eliminate health and safety risks wherever possible, and provide greater protection for our people and communities” gave the false impression that the Company had appropriate systems in place at its mining operations to prevent the very type of incident that occurred at Samarco only two weeks later. As detailed above,

however, Samarco did not have such systems in place. Accordingly, it was also false and misleading for the 10/22/15 AGM to positively portray the Company's safety and risk management controls and systems, when such controls and systems were absent at Samarco.

**C. The Company's Compliance with Local Laws and Regulations**

254. In its 2014 Form 20-F, filed with the SEC on September 25, 2014, the Company acknowledged the importance of compliance with local laws and regulations of the communities in which its mining operations are located, and represented that those operations are compliant. Specifically, the Company represented, in pertinent part, as follows:

We operate in an industry where many of our activities are highly regulated by laws governing health, safety and the environment. We are committed to compliance with the laws and regulations of the countries in which we operate and, where applicable, to exceeding legal and other requirements which are less stringent than our own.

255. To further convey the impression that the Company faithfully follows applicable law in the communities in which it operates, defendant Beaven, CFO and former President of Copper, made similar representations in the November 23, 2014 BHP Plc investor briefing and update. In these statements, he discussed the Company's focus on sustainability and interest in preserving and fostering the local communities in which it operates, not least because the Company's business depends on operating licenses. Specifically, defendant Beaven stated, in pertinent part, as follows:

We fundamentally believe that we need to be aligned with our communities. We need to be in line with our community, because we need a license to operate; and we need that license to operate to run on a multiple decades' basis. I don't believe that as society changes then we should sit and hang back and wait and be pulled in the direction of that society.

256. Additionally, in the 2015 Form 20-F, filed with the SEC on September 23, 2015, the Company made a representation identical to that contained in the 2014 Form 20-F regarding the importance and status compliance with local laws and regulations of the communities in which its mining operations are located. Specifically, the Company represented, in pertinent part, as follows:

We operate in an industry where many of our activities are highly regulated by laws governing health, safety and the environment. We are committed to compliance with the laws and regulations of the countries in which we operate and, where applicable, to exceeding legal and other requirements which are less stringent than our own.

257. The statements in the 2014 Form 20-F, the November 23, 2014 briefing, and the 2015 Form 20-F concerning compliance with local laws and regulations were materially false and misleading when made, because Samarco's operations did not comply with such laws or regulations. In the wake of the Fundão dam collapse, Brazilian prosecutors and government officials charged that Samarco's operations did not comply with dam licensing requirements or local environmental laws.

258. For example, news reports confirmed on November 9, 2015 that Samarco's mining license had been suspended on or about November 6, 2015 as a result of concerns that it had not complied with required safety standards. According to Geraldo Abreu ("Abreu"), the Deputy Environmental Secretary of Minas Gerais, "[Samarco] will need to make a number of changes before we allow them to begin mining again." Subsequently, Abreu commented that the Fundão dam would not be part of any licensing application for Samarco to recommence operations. Indeed, according to Abreu: "The dam will not be used if the mine restarts operations, so it's not involved in the licensing process."

259. Further, according to Brazilian newspaper *Estado de Minas*, the EAP that Samarco had in place ignored Brazilian Federal Law 12.334 – which establishes Brazil's national policy on dam safety – since September 20, 2010.

#### **D. Samarco's Production Capacity and Projected Performance**

260. Throughout 2015, Defendants periodically provided updates on the impact that the P4P Project has had on Samarco's production capacity. In a January 21, 2015 press release, filed as an attachment to Form 6-K with the SEC on the same date, the Company provided investors with BHP's operational review for the half year ended December 31, 2014, and, with respect to Samarco,

stated: “Samarco production increased by 29 per cent in the December 2014 half year to a record 14 Mt (100 per cent basis) as the ramp-up of the fourth pellet plant continues to plan.”

261. In an April 22, 2015 press release, filed as an attachment to Form 6-K with the SEC on the same date, the Company provided investors with BHP’s operational review for the nine months ended March 31, 2015, and, with respect to Samarco, stated: “Samarco production for the nine months ended March 2015 increased by 37 per cent to a record 22 Mt (100 per cent basis) as the fourth pellet plant reached full capacity during the period.”

262. Likewise, in a July 22, 2015 press release, filed as an attachment to Form 6-K with the SEC on the same date, the Company provided investors with BHP’s operational review for the year ended June 30, 2015, and, with respect to Samarco, stated: “Samarco production increased by 33 per cent in the 2015 financial year to 29 Mt (100 per cent basis) as the fourth pellet plant ramped up to full capacity during the March 2015 quarter.”

263. Additionally, during the August 25, 2015 full-year earnings presentation for BHP Plc, defendant Mackenzie assured investors that BHP was increasing production and lowering costs while maintaining a safe operating environment, representing, in pertinent part, as follows: “We’ve built a strong track record over the last three years and delivered productivity gains of over \$10 billion and we’ll continue to deliver lower and lower costs as we run our operations more and more safely and more and more efficiently.”

264. In the 2015 Form 20-F, filed with the SEC on September 23, 2015, Defendants continued to make incomplete representations concerning Samarco and the P4P Project, stating, in pertinent part, that: “Samarco production increased by 33 per cent to 29 Mt (100 per cent basis) as the fourth pellet plant ramped up to full capacity.”

265. The statements from January to September 2015 regarding Samarco's production of iron ore, including its increase in production capacity, were materially misleading in the absence of disclosure of the significant structural and other problems affecting those mining operations. Those issues, which Defendants knew or recklessly disregarded remained unaddressed, undermined the reasonableness of representations regarding Samarco's production capacity or status.

266. Accordingly, it was misleading to make such production representations without disclosing the existence of adverse issues and conditions that reasonably could prevent Samarco from achieving such production on an ongoing basis. Indeed, in the absence of such disclosure, investors were led to believe that Samarco would continue to contribute to BHP's long-term iron ore production and that no then-known impediments would prevent it from doing so, when that was not, in fact, the case.

**E. The Toxicity of Tailings-Based Mudflows**

267. On November 16, 2015, BHP hosted a conference call with investors and analysts to provide an update on the Fundão dam collapse. In response to an analyst's question about the chemical composition of the tailings material and sediment released from the dam, defendant Mackenzie assured that the tailings and resulting mudflow were "reasonably inert" and "benign," particularly with dilution – presumably, as when the tailings mixed with local water sources. The exchange took place as follows:

BEN MCEWEN, CIBC: Do you have any indication as to the chemical composition of the tailings material and sediment?

ANDREW MACKENZIE: Yes, we do broadly. The headline is that the tailings material is reasonably inert. It is effectively the reject from a density separation to concentrate the iron ore. It is a mixture of iron ore and what occurs in banded iron formations, which is a cherty silica that has been ground more finely. It is not inherently active and does not contain things like heavy metals. It is slightly acidic but, with the dilution, is reasonably benign. I do not want to go beyond that. We need to do more investigation. We have to a lot of baselining to see what is really happening, but the mixture is broadly inert.

268. Mackenzie's comments were repeated in the press in the days after the November 16, 2015 call, including by *The Australian* and *Seeking Alpha*. In addition, analysts, including Myles Allsop with UBS in a report dated November 16, 2015, noted that defendant Mackenzie had confirmed that the mudflow was broadly inert.

269. On November 19, 2015, defendant Mackenzie reiterated to reporters that the tailings released posed little environmental harm and was "less challenging" to remediate "than it otherwise might have been," stating, in pertinent part: "[t]his is relatively inert material . . . it's iron ore, clay, a bit of silica that has been finely ground. So that makes it less challenging than it might otherwise have been to remediate[.]"

270. On November 25, 2015, the United Nations issued a press release specifically refuting defendant Mackenzie's claims that the tailings released from the Fundão dam and the resulting mudflow were inert, benign and relatively harmless. As the United Nations reported:

New evidence shows the collapse of a tailing dam belonging to a joint venture of Vale and BHP Billiton (Samarco Mining S.A.), which released 50 million tons of iron ore waste, contained high levels of toxic heavy metals and other toxic chemicals in the river Doce. Hospitals in Mariana and Belo Horizonte, the capital city of Minas Gerais State have received several patients.

271. According to reports associated with the United Nations' inspection, multiple tests conducted in towns on the Rio Doce confirmed that the mudflow contained dangerously high levels of toxic heavy metals including arsenic, barium and manganese.

272. This evidence was gathered and analyzed by at least two independent experts on environment and toxic waste associated with the United Nations, known as Special Rapporteurs. The Special Rapporteurs are part of what is known as the Special Procedures of the Human Rights Council. Special Procedures, the largest body of independent experts in the United Nations Human Rights system, is the general name of the Council's independent fact-finding and monitoring mechanisms that address either specific country situations or thematic issues in all parts of the world.

Special Procedures' experts work on a voluntary basis; they are not United Nations staff and do not receive a salary for their work. According to the United Nations, they are independent from any government or organization and serve in their individual capacity.

273. By virtue of the foregoing, defendant Mackenzie's representations regarding the toxicity of the tailings and mudflow were knowingly or recklessly false and misleading when made and otherwise lacked a reasonable basis in fact. When defendant Mackenzie made these statements on November 16 and 19, 2015, a reasonable investor would have assumed that he had tested the composition and toxicity levels of the tailings and mudflow and had a reasonable basis to conclude that the materials were, in fact, inert, benign and relatively harmless. With the public disclosure of the United Nations' testing and examination, however, investors learned that Mackenzie's statements were false.

274. Additionally, after the release of the United Nations' results, further evidence emerged that confirmed the presence of toxins in the mudflow resulting from the tailings. Multiple tests, including those conducted on behalf of IGAM, confirmed the presence of toxic heavy metals in the mudflow. In fact, even Vania Somavilla ("Somavilla"), Vale's executive director of human relations, health and safety, sustainability and energy, admitted the flow of tailings released from the dam may have upset toxic elements settled in the bed of the Rio Doce, or along its banks.

275. According to a November 27, 2015 *Wall Street Journal* article, Somavilla cited the IGAM report when stating: "In fact there was lead, arsenic – not mercury – detected in some points along the [Rio Doce] river." She further stated: "When the dam breaks and that stuff washes out the banks of the river, it could have picked up some kind of material that was already present, from the most diverse of origins, but they're all materials present in nature." As the article recounted, these



statements contradicted previous denials in which Vale, BHP and Samarco all claimed that the mud unleashed by the dam break comprised water, mud, iron-oxide and sand, none of which are harmful.

276. In response to this revelation, the trading price of the ADRs declined, as further detailed below.

**F. The Status of the Progressive Dividend Policy**

277. As detailed above, BHP repeatedly emphasized the importance of its progressive dividend policy throughout the Class Period.

278. In the 2014 Form 20-F, BHP explained that the objective of its progressive dividend policy “is to steadily increase or at least maintain our base dividend in US dollars at each half yearly payment. Our progressive base dividend is the minimum annual distribution that a shareholder should expect and is expected to grow broadly in accordance with the growth of our business.” As the Company explained in the 2014 Form 20-F, “returning excess capital to shareholders firstly with its progressive dividend policy” is a fundamental priority for cash flow.

279. Likewise, during the Class Period, the Company repeatedly referenced its progressive dividend policy in Forms 6-K, providing a similar, if not identical, description of the policy to that contained in the 2014 Form 20-F. In fact, on August 25, 2015, defendant Mackenzie rejected the prospect of abandoning the progressive dividend policy, stating: “[O]ver my dead body sounds a little strong but it’s almost right.”

280. In the 2015 Form 20-F, BHP again provided a description of the progressive dividend policy. Additionally, in the CEO’s Report section of the 2014 Form 20-F, defendant Nasser stated: “Improved operational productivity has generated strong cash flow to fund the progressive dividend, maintain a solid ‘A’ credit rating and allow us to continue to invest in growth.”

281. The Class Period statements regarding the status and health of BHP’s progressive dividend, which led investors to believe that management was confident in the Company’s ability to

meet or exceed past dividend levels, were materially false and misleading in the absence of disclosure of the problems then-affecting Samarco. Yet Samarco's contribution to the Company's iron ore production and earnings was integral to the Company's ability to maintain the progressive dividend. Given the existence of significant problems at Samarco and the risk of catastrophic failure at the Fundão dam – which later came to fruition – it was unreasonable for Defendants to represent that the progressive dividend would remain in place.

282. The direct link between the health of the progressive dividend and Samarco's own well-being was confirmed in the wake of the Fundão dam collapse. On November 23, 2015, before the opening of trading, the Brazilian government labeled the Fundão dam collapse "the worst environmental disaster in [Brazil's] history." In addition, media reports circulated stating that BHP would either have to end its prized progressive dividend policy or face a credit ratings downgrade given, among other things, the uncertainty around the ultimate costs for the Fundão dam collapse.

283. Ultimately, on February 22, 2016, BHP abandoned its progressive dividend policy, which was in place for over 13 years, and cut its first half dividend by over 74%, from \$0.62 per share to \$0.16 per share. Thus, the progressive dividend was unsustainable without Samarco's contributions to the Company.

#### **G. The Omission of Uncertainties, Risks and Risk Factors**

284. Item 303 required disclosure of known risks and uncertainties in the Company's Form 20-F filings during the Class Period. In turn, Item 503 required disclosure of the most significant factors that would make the securities of the Company risky.

285. The 2014 and 2015 Forms 20-F did not mention any risks or uncertainties to the Company's business associated with Samarco's mining operations, nor did they disclose any factors relating to Samarco that would make the ADRs speculative or risky.

286. As detailed herein, however, the Fundão dam suffered from longstanding and significant design defects and structural problems that presented risks and uncertainties for the continued operation of Samarco's iron ore mines. Additionally, Samarco lacked a viable EAP and adequate monitoring systems to provide early warning of a potential collapse of the Fundão dam. These issues presented risks and uncertainties to BHP's business and operations, and also rendered an investment in the ADRs speculative or risky given the uncertain – yet materially adverse – impact on BHP that a problem at Samarco could have.

287. Moreover, Company management knew about, or recklessly disregarded, the state of the Fundão dam and Samarco's operations. Not only had BHP admittedly reviewed the Pristino Report when it was issued in October 2013, but the Company also approved the P4P Project -- which dramatically increased production at Samarco. Furthermore, the Company had active representation on the Samarco Board, which itself approved heightening Fundão twice – in April 2015.

288. Finally, BHP was well aware that Vale had the contractual right to dispose of tailings in the Fundão dam, and could have readily appreciated the impact that the additional tailings would have on the integrity of the dam.

289. Accordingly, the 2014 and 2015 Forms 20-F failed to disclose known risks and uncertainties to the Company arising out of the precarious condition of Samarco's operations, nor did they disclose risks associated with Samarco that rendered an investment in the ADRs risky.

#### **H. The Completeness of the 2014 and 2015 Forms 20-F**

290. The Company's 2014 Form 20-F, filed with the SEC on September 25, 2014, included certifications, signed by defendants Mackenzie and Kerr, pursuant to Section 906 of SOX. These certifications, dated September 25, 2014, provided, in pertinent part, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Companies.

291. Likewise, the Company's 2015 Form 20-F, filed with the SEC on September 23, 2015, also included certifications, signed by defendants Mackenzie and Beaven, pursuant to Section 906 of SOX. These certifications, dated September 25, 2014, provided, in pertinent part, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Companies.

292. As set forth herein, the 2014 and 2015 Forms 20-F failed to disclose material information necessary to provide a fair representation of the Company's financial and operational condition. Therefore, the certifications included in those filings were materially misleading.

#### **VIII. LOSS CAUSATION/ECONOMIC LOSS**

293. As detailed herein, Defendants engaged in a scheme to deceive the market and a course of conduct which artificially inflated the price of the ADRs and operated as a fraud or deceit on Class Period purchasers of the ADRs. When Defendants' prior misrepresentations and fraudulent conduct were disclosed and became apparent to the market, the trading price of the ADRs fell precipitously as the artificial inflation was removed.

294. As a result of their purchases of ADRs during the Class Period, Plaintiffs and the other Class members suffered economic loss, *i.e.*, damages, under the federal securities laws. Defendants' false and misleading statements had the intended effect and caused the ADRs to trade at artificially inflated levels throughout the Class Period, reaching as high as \$59.57 per ADR for BHP on September 25, 2014, and as high as \$56.69 per ADR for BBL on September 25, 2014.

295. On Thursday, November 5, 2015, the Fundão dam burst, flooding the nearby town of Bento Rodrigues with 60 million cubic meters of mud and mine waste. Samarco's operations were

immediately suspended. And news reports immediately surfaced regarding the catastrophe after the close of trading that day, some of which linked the incident to possible safety issues at Samarco. For example, in a November 5, 2015 *New York Times* article, Brazilian state prosecutor commented: “We need rigor in determining what happened . . . No dam bursts by chance.”

296. Other articles also reported on Pinto’s comments, which implied a link between the dam break and Samarco’s – and BHP’s – safety practices and protocols. For example, a November 6, 2015 *Sydney Morning Herald* article containing the same quote from Pinto reported that “BHP chief executive Andrew Mackenzie spoke about the impact of workplace fatalities just two weeks ago at the company's annual meeting of London shareholders.” As the article further reported, defendant Mackenzie stated: “We have engaged tens of thousands of our people across the company in discussions to upgrade their health and safety leadership, to make their workplaces healthier and safer, free from fatalities, serious injuries and long term health effects.”

297. In response to the revelations on November 5 and 6, 2015, the trading price of the BHP ADRs declined from \$32.44 to \$30.75 – a decline of \$1.69, or 5.2%. Similarly, the trading price of the BBL ADRs declined from \$31.54 to \$29.57 – a decline of \$1.87, or 5.9%.

298. On Monday, November 9, 2015, in a news release filed as an attachment to Form 6-K with the SEC prior to the opening of the market that same day, BHP provided an update on the “incident at Samarco.” The Company disclosed that the Fundão dam had collapsed, that at least one fatality had been confirmed, and that, as a result of the collapse, BHP was reviewing its iron ore production guidance for fiscal year 2016.

299. In response to this news, and the apparent connection between the Fundão dam break and BHP’s current and projected iron ore production (which was materially dependent on Samarco’s production), the trading price of the BHP ADRs declined from \$30.75 to \$29.94 – a decline of \$0.81,

or 2.6%. Similarly, the trading price of the BBL ADRs declined from \$29.67 to \$29.26 – a decline of \$0.41, or 1.4%.

300. On November 11 and 12, 2015, media outlets reported that Samarco's mining license was suspended as of November 9, 2015 and that the Pristino Report flagged problems at the Fundão dam – and recommended various remedial actions as a condition to relicensing – two years earlier. In at least one article, Pinto referenced the Pristino report and revealed his opposition to renewing the license in 2013 as a result of concerns about destabilization and erosion.

301. Additionally, on November 11, 2015, BHP and Vale confirmed they would establish an emergency fund for Samarco victims, this acknowledging their culpability and potential liability for the incident at Samarco. On November 12, 2015, BHP filed a media release regarding the fund as an attachment to Form 6-K with the SEC prior to the opening of the market.

302. In response to the revelations on November 11 and 12, 2015 concerning BHP's stance on Samarco and the existence and content of the Pristino Report, the trading price of the ADRs declined on both days. On November 11, 2015, the trading price of the BHP ADRs declined from \$29.88 to \$28.93 (*i.e.*, \$0.95, or 3.18%), while the BBL ADRs declined from \$28.89 to \$27.98 (*i.e.*, \$0.91, or 3.15%). Similarly, on November 12, 2015, the trading price of the BHP ADRs declined from \$28.93 to \$28.19 (*i.e.*, \$0.74, or 2.56%), while the BBL ADRs declined from \$27.98 to \$26.80 (*i.e.*, \$1.18, or 4.22%), on more than double the volume of the previous trading day.

303. Soon, concerns arose regarding the longevity of the Company's progressive dividend. In a November 19, 2015 article published by *The Australian*, the issue was starkly framed thusly:

A likely marathon BHP Billiton annual meeting in Perth today is set to be dominated by two issues – the devastating iron ore tailings collapse at the group's half-owned Samarco mine in Brazil, and whether its progressive dividend policy faces the chop.

304. As the article related, “the plunge to near 10-year lows in the [Company’s] stock also reflects investor concerns about the reputational and financial impact of the Samarco disaster, and what effect it would have on BHP’s progressive dividend commitment.” Other articles also reported that maintaining the dividend policy could threaten the Company’s credit rating.

305. In response to this news and the market’s realization that the progressive dividend might no longer be sustainable as a result of the Samarco incident, the trading price of the ADRs experienced sequential declines.

306. On Friday, November 20, 2015, the trading price of the BHP ADRs declined slightly, but the BBL ADRs declined by 1.47% – from \$27.30 to \$26.90. On Monday, November 23, 2015, the trading price of the BHP ADRs declined from \$29.10 to \$28.43 (*i.e.*, \$0.67, or 2.3%), while the BBL ADRs declined from \$26.90 to \$26.27 (*i.e.*, \$0.63, or 2.34%).

307. Subsequently, reports emerged that the tailings mudflow resulting from the Fundão dam’s collapse contained toxic heavy metals. These reports contradicted denials by BHP and Vale, including defendant Mackenzie’s statement on November 16, 2015 that the mudflow was “inert.” For example, on November 25, 2015, the United Nations reported the presence of dangerous levels of toxic heavy metals in the Rio Doce River.

308. In response to this news, on November 25, 2015, the trading price of the BHP ADRs declined from \$28.78 to \$27.53 (*i.e.*, \$1.25, or 4.34%), while the BBL ADRs declined from \$26.64 to \$25.53 (*i.e.*, \$1.11, or 4.17%), on higher-than-normal trading volume.

309. On Friday, November 27, 2015, the trading day after Thanksgiving (November 26, 2015), Somavilla, Vale’s executive director of human relations, health and safety, sustainability and energy, acknowledged the presence of toxic elements in the Rio Doce River – a first-of-its-kind admission that shocked the market, given the staunch prior denials by Vale and BHP. Additionally,

news broke that the Brazilian government planned to sue Vale, BHP and Samarco for approximately \$5.3 billion as a result of the Fundão dam incident.

310. These reports had a dramatic effect on the trading price of the ADRs. On November 27, 2015, the trading price of the BHP ADRs declined from \$27.53 to \$26.98 (*i.e.*, \$0.55, or 2%), while the BBL ADRs declined from \$25.53 to \$24.59 (*i.e.*, \$0.94, or 3.68%), again on higher-than-normal trading volume.

311. Finally, on Monday, November 30, 2015, BHP filed a news release as an attachment to Form 6-K with the SEC before the market opened. Providing an update on the Samarco incident, the Company disclosed that the Brazilian government intended to bring legal proceedings against it, as well as Vale and Samarco. The objective of the suit, according to BHP, was to establish a \$5.2 billion fund to provide for environmental recovery and compensation over a period of 10 years.

312. Also on November 30, 2015, Brazilian President Dilma Rousseff placed BHP and Vale squarely within the crosshairs, publicly blaming the Samarco disaster on the “irresponsible action of a company” and adding: “We are severely punishing those responsible for this tragedy.”

313. In response to this news, the trading price of the BHP ADRs declined from \$26.98 to \$26.68 (*i.e.*, \$0.30, or 1.1%), while the BBL ADRs declined from \$24.59 to \$24.25 (*i.e.*, \$0.34, or 1.4%), on extraordinarily high trading volume.

314. As shown above, the timing and magnitude of the price declines in the ADRs negate any inference that the loss suffered by Plaintiffs and other investors was caused by changed market conditions, macroeconomic or industry factors or Company-specific facts unrelated to the fraud.

## **IX. ADDITIONAL SCIENTER ALLEGATIONS**

315. As alleged herein, the Company and the Individual Defendants acted with scienter in that they knew that the public documents and statements issued or disseminated in the name of the Company were materially false and misleading; knew that such statements or documents would be



issued or disseminated to the investing public; and knowingly and substantially participated or acquiesced in the issuance or dissemination of such statements or documents as primary violations of the federal securities laws. As set forth elsewhere herein in detail, these Defendants, by virtue of their receipt of information reflecting the true facts regarding the Company, their control over, and/or receipt and/or modification of the Company's materially misleading statements and/or their associations with the Company which made them privy to confidential proprietary information concerning the Company, participated in the fraudulent scheme alleged herein.

316. Defendants knew and/or recklessly disregarded the false and misleading nature of the information which they caused to be disseminated to the investing public. The fraudulent scheme described herein could not have been perpetrated during the Class Period without the knowledge and complicity or, at least, the reckless disregard of the personnel at the highest levels of the Company, including the Individual Defendants.

317. The Individual Defendants were executive officers of BHP and, at a minimum, should have been aware of key facts related to the Company's operations, including its safety practices and related risks, and the Fundão dam collapse. The Individual Defendants were either members of the Board and/or the Group Management Committee during the Class Period. These facts establish that the Individual Defendants were personally involved in, and knowledgeable about, BHP's safety practices and related risks, and the Fundão dam collapse.

318. The Individual Defendants were each members of BHP's senior management and/or Board during the Class Period. Based on their roles at BHP, each of the Individual Defendants would have been involved with, or knowledgeable about, the wrongdoing alleged herein.

319. The scienter of the Individual Defendants and BHP is further evidenced by, among other things, the following factors:

(a) during the Class Period, Wilson was a member of the Group Management Committee with defendants Mackenzie, Beaven and Kerr, and simultaneously served as either the Chairman or Vice President of the Samarco Board;

(b) before the Class Period, Randolph was a member of the Group Management Committee with defendants Mackenzie and Kerr, and simultaneously served as either the Chairman or Vice President of the Samarco Board;

(c) before and during the Class Period, numerous other BHP executives served as regular or alternate directors on the Samarco Board, and/or as BHP representatives on the subcommittees of the Samarco Board;

(d) before and during the Class Period, BHP conducted a yearly audit of Samarco;

(e) before and during the Class Period, the Samarco Board had a subcommittee specifically dedicated to the P4P Project;

(f) before and during the Class Period, the Samarco Board routinely discussed the tailings dam-related issues regarding implementation of the P4P Project, the ongoing risks associated with tailings storage, the danger that Samarco's tailings dams posed to the nearby communities, and the elevation of the Fundão dam;

(g) BHP was dedicated to protecting its progressive dividend policy at all costs, including, according to defendant Mackenzie, "over my dead body";

(h) before and during the Class Period, the capacity of the Fundão dam had expanded by approximately 1100%, from 5 million cubic meters to 55 million cubic meters;

(i) the Fundão dam was receiving a significant amount of additional tailings waste from a nearby Vale dam, further overtaxing the dam;

(j) Pimenta de Avila provided Samarco executives with notice of numerous dangerous conditions present at the Fundão dam;

(k) the Pristino Report, which defendant Nasser admits BHP knew about in 2013, detailed numerous dangerous conditions present at the Fundão dam that were never corrected by Samarco;

(l) numerous other problems with the Fundão dam were detailed and noticed by the Samarco employees responsible for overseeing the dam, including that the piezometers indicated emergency warnings and that there were cracks in the dam;

(m) Samarco lacked an adequate EAP and executives chose not to implement the proposed new EAP that was developed by Fonseca (which would have cost only \$1.5 million) because Samarco sought to reduce costs at the expense of everything else; and

(n) numerous local Brazilian water authorities had tested the mudflow from the Fundão dam collapse and each of them determined that the mudflow contained dangerous levels of toxic heavy metals.

320. Taken collectively, the facts and circumstances described above demonstrate a strong inference that Defendants acted with scienter in making the misrepresentations and omissions challenged herein.

321. Additionally, the resignation and/or termination of Wilson – who was the President of Iron Ore, a member of the Samarco Board, and served on the Group Management Committee with defendants Mackenzie, Kerr and Beaven – also contributes to an inference of scienter. Wilson's departure in February 2016 came shortly after the end of the Class Period and the Fundão dam collapse. Likewise, BHP's appointment of Della Valle to oversee BHP's efforts in addressing the aftermath of the Fundão dam collapse in January 2016, in concert with Wilson's departure from the

Company, demonstrates Defendants' knowledge that the Company lacked adequate safety practices, or, at a minimum, recklessness in not ensuring that adequate personnel were overseeing BHP and Samarco's safety practices during the Class Period.

322. Moreover, the "qualified homicide" charges being pursued against six senior Samarco employees, including Vescovi and Terra, as well as the charges against them for endangering public health by polluting the region's drinking water, supports a finding of scienter.

323. Likewise, the conclusion by the state police in Minas Gerais that the Fundão dam was raised too quickly and that its collapse was caused by liquefaction supports a finding of scienter.

324. In addition, the federal Brazilian police's investigation findings that, among other things, Samarco had ignored clear signs that the Fundão dam was at risk of failing for years, that Samarco skimmed on safety spending and focused instead on increasing production, and that Samarco was "more than negligent" and that the collapse was not "an accident," supports a finding of scienter.

325. The scope and breadth of the police report containing these findings – 26 volumes comprising over 30,000 pages, including internal Samarco instant message communications – bolsters the credibility of these findings and, concomitantly, Defendants' scienter.

326. At a minimum, Defendants failed to review or check information that they had a duty to monitor, or ignored obvious signs that their statements were materially false and misleading or contained material omissions. Given the nature and extent of the problems at BHP and Samarco, Defendants knew and/or recklessly disregarded the extent and scope of their statements during the Class Period.

327. Likewise, the Individual Defendants, by virtue of their high-level positions with the Company, directly participated in the management of the Company, were directly involved in the

day-to-day operations of the Company at the highest levels, and were privy to confidential proprietary information concerning the Company and its business, operations, financial statements, and financial condition, as alleged herein. The Individual Defendants had the ultimate authority over and were involved in drafting, producing, reviewing and/or disseminating the false and misleading statements and information alleged herein, were aware, or recklessly disregarded, that the false and misleading statements regarding the Company were being issued, and approved or ratified these statements, in violation of the federal securities laws.

328. Moreover, Defendants failed to disclose the increased risk associated with, among other things, the P4P Project and the Fundão dam, which rendered the challenged statements materially false and misleading, thereby giving rise to an affirmative duty and/or obligation to disclose these known trends and uncertainties.

329. Likewise, the fraud alleged herein relates to the core business and operations of BHP so knowledge of the fraud may be imputed to Defendants. Given Defendants' knowledge of the truth concerning the Company's increased risk of its safety practices, and the Fundão dam collapse, the positive statements detailed above, made contemporaneously with that knowledge, were false and/or misleading. Furthermore, these facts were known by BHP employees in senior positions at BHP and their knowledge can be imputed to BHP itself.

330. The allegations above also establish a strong inference that BHP as an entity acted with corporate scienter throughout the Class Period, as its officers, management, and agents had actual knowledge of the misrepresentations and omissions of material facts set forth herein (for which they had a duty to disclose), or acted with reckless disregard for the truth because they failed to ascertain and to disclose such facts, even though such facts were available to them. Such material misrepresentations and/or omissions were done knowingly or with recklessness, and without a

reasonable basis, for the purpose and effect of concealing BHP's true operating condition and present and expected financial performance from the investing public. By concealing these material facts from investors, BHP maintained and/or increased its artificially inflated ADRs prices throughout the Class Period.

#### **X. CLASS ACTION ALLEGATIONS**

331. Plaintiffs bring this action as a class action pursuant to Federal Rule of Civil Procedure 23(a) and (b)(3) on behalf of a class consisting of all purchasers of the ADRs during the Class Period, and who were damaged thereby (the "Class"). Excluded from the Class are Defendants and their families, as well as the officers and directors of the Company and the members of their immediate families and their legal representatives, heirs, successors or assigns and any entity in which Defendants have or had a controlling interest.

332. The members of the Class are so numerous that joinder is impracticable. Throughout the Class Period, the ADRs were actively traded on the NYSE. While the exact number of Class members is unknown to Plaintiffs at this time and can only be ascertained through discovery, Plaintiffs believe there are hundreds, if not thousands, of members in the proposed Class. Record owners and other members of the Class may be identified from records maintained by BHP or its transfer agent and may be notified of the pendency of this action by mail, using the form of notice similar to that customarily used in securities class actions.

333. Plaintiffs' claims are typical of the claims of members of the Class because all Class members are and were similarly affected by Defendants' wrongful conduct in violation of federal law, as alleged herein.

334. Plaintiffs will fairly and adequately protect the interests of the members of the Class and have retained counsel competent and experienced in class action and securities litigation.

335. Common questions of law and fact exist as to all Class members and predominate over any questions solely affecting individual members of the Class. Among the questions of law and fact common to the Class are:

- (a) whether the Exchange Act was violated by Defendants as alleged herein;
- (b) whether statements made by Defendants to the investing public during the Class Period misrepresented material facts about the business and operations of BHP;
- (c) whether the trading price of the ADRs was artificially inflated during the Class Period; and
- (d) to what extent the members of the Class have sustained damages and the proper measure of damages.

336. A class action is superior to all other available methods for the fair and efficient adjudication of this controversy since joinder of all members is impracticable. Furthermore, as the damages suffered by individual Class members may be relatively small, the expense and burden of individual litigation make it impossible for members of the Class to individually redress the wrongs done to them. There will be no difficulty in the management of this action as a class action.

**XI. APPLICABILITY OF PRESUMPTION OF RELIANCE:  
FRAUD-ON-THE-MARKET AND *AFFILIATED UTE* PRESUMPTIONS**

337. Plaintiffs will rely upon the presumption of reliance established by the fraud on the market doctrine as enunciated in *Basic Inc. v. Levinson*, 485 U.S. 224 (1988) (“*Basic*”) and the presumption of reliance for omissions as enunciated in *Affiliated Ute Citizens of Utah v. United States*, 406 U.S. 128 (1972) (“*Affiliated Ute*”).

338. With respect to the *Basic* presumption, a presumption of reliance under the fraud-on-the-market doctrine is appropriate because, among other things:

(a) Defendants made public misrepresentations or failed to disclose material facts during the Class Period;

(b) the omissions and misrepresentations were material;

(c) the ADRs traded in efficient markets;

(d) the misrepresentations alleged would tend to induce a reasonable investor to misjudge the value of the ADRs; and

(e) Plaintiffs and other members of the Class purchased the ADRs between the time Defendants misrepresented or failed to disclose material facts and the time the true facts were disclosed, without knowledge of the misrepresented or omitted facts.

339. At all relevant times, the market for the ADRs was efficient for the following reasons, among others:

(a) the ADRs met the requirements for listing and were listed and actively traded on the NYSE, a highly efficient, electronic stock market;

(b) as a regulated issuer, BHP filed periodic public reports with the SEC and the NYSE;

(c) BHP regularly communicated with public investors via established market communication mechanisms, including regular disseminations of press releases on the national circuits of major newswire services and through other wide-ranging public disclosures, such as communications with the financial press and other similar reporting services; and

(d) BHP was followed by stock analysts employed by major brokerage firms who wrote reports distributed to the sales force and certain customers of their respective brokerage firms. Each of these reports was publicly available and entered the public marketplace.



340. As a result of the foregoing, the market for the ADRs promptly digested current information regarding the Company from publicly available sources and reflected such information in the price of the ADRs. Under these circumstances, all purchasers of the ADRs during the Class Period suffered similar injury through their purchase of such ADRs at artificially inflated prices, and a presumption of reliance applies.

341. In addition to the *Basic* presumption, a class-wide presumption of reliance is also appropriate in this action under the Supreme Court's holding in *Affiliated Ute*, because the claims alleged are grounded on Defendants' material omissions. Because this action involves Defendants' failure to disclose material adverse information regarding BHP's business operations and financial prospects and performance – information that Defendants were obligated to disclose – positive proof of reliance is not a prerequisite to recovery.

342. Rather, all that is necessary to invoke the *Affiliated Ute* presumption of reliance is that the facts withheld would be material in the sense that a reasonable investor might have considered them important in making investment decisions. Given the importance of the Class Period material misstatements and omissions set forth above, that requirement is satisfied here.

## **XII. NO SAFE HARBOR**

343. The statutory safe harbor provided for forward-looking statements under certain circumstances does not apply to any of the false statements alleged. Many of the statements herein were not identified as “forward-looking statements” when made. To the extent there were any forward-looking statements, no meaningful cautionary statements identified important factors that could cause actual results to differ materially from those in the purportedly forward-looking statements. Alternatively, to the extent that the statutory safe harbor does apply to any forward-looking statements pleaded herein, Defendants are liable for those false forward-looking statements because at the time each of those forward-looking statements was made, the particular speaker knew

that the particular forward-looking statement was false, and/or the forward-looking statement was authorized and/or approved by an executive officer of the Company who knew that those statements were false when made.

## **COUNT I**

### **Violation of Section 10(B) of the Exchange Act and Rule 10b-5 Against Defendants**

344. Plaintiffs repeat and reallege each allegation contained above as if set forth herein.

345. During the Class Period, Defendants disseminated and approved false and misleading statements, which they knew or deliberately disregarded were false and misleading when made.

346. Defendants violated Section 10(b) of the Exchange Act and Rule 10b-5 in that they:

- (a) employed devices, schemes, and artifices to defraud;
- (b) made untrue statements of material facts or omitted to state material facts necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading; and/or

- (c) engaged in acts, practices, and a course of business that operated as a fraud or deceit upon Plaintiffs and others similarly situated in connection with their purchases of the ADRs during the Class Period.

347. As alleged herein, Defendants acted with scienter in that they knew that the public documents and statements issued or disseminated in the name of the Company were materially false and misleading; knew that such statements or documents would be issued or disseminated to the investing public; and knowingly and substantially participated or acquiesced in the issuance or dissemination of such statements or documents as primary violations of the federal securities laws.

348. Additionally, as set forth elsewhere herein, Defendants participated in the fraudulent scheme alleged herein by virtue of their receipt of information reflecting the true facts regarding

BHP, their control over, and/or receipt and/or modification of BHP's allegedly materially misleading misstatements and/or their associations with the Company, which made them privy to confidential proprietary information concerning BHP.

349. Further, as detailed above, Defendants had a duty to disclose the material information described herein, and violated the affirmative disclosure obligations imposed by Items 303 and 503.

350. Plaintiffs and the Class have suffered damages in that, in reliance on the integrity of the market, they paid artificially inflated prices for the ADRs. Plaintiffs and the Class would not have purchased the ADRs at the prices they paid, or at all, had they been aware that the market prices had been artificially and falsely inflated by Defendants' misleading statements.

351. As a direct and proximate result of these Defendants' wrongful conduct, Plaintiffs and the other members of the Class suffered damages in connection with their purchases of the ADRs during the Class Period.

## **COUNT II**

### **Violation of Section 20(a) of the Exchange Act Against Defendants**

352. Plaintiffs repeat and reallege each allegation above as if set forth herein.

353. Defendants acted as controlling persons of BHP within the meaning of Section 20(a) of the Exchange Act. By reason of their positions as officers and/or directors of BHP, Defendants had the power and authority to cause BHP to engage in the wrongful conduct complained of herein.

354. By reason of such conduct, Defendants are liable pursuant to Section 20(a) of the Exchange Act.

355. As a direct and proximate result of these Defendants' wrongful conduct, Plaintiffs and the other members of the Class suffered damages in connection with their purchases of ADRs during the Class Period.

### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiffs, on behalf of themselves and the Class, pray for judgment:

- A. Determining that this action is a proper class action, certifying Plaintiffs as Class Representatives under Fed. R. Civ. P. 23, and appointing Lead Counsel as Class counsel;
- B. Awarding compensatory damages in favor of Plaintiffs and the other Class members against all Defendants, jointly and severally, for all damages sustained as a result of Defendants' wrongdoing, in an amount to be proven at trial, including interest thereon;
- C. Awarding Plaintiffs and the Class their reasonable costs and expenses incurred in this action, including counsel fees and expert fees; and
- D. Awarding Plaintiffs and other members of the Class such other and further relief as the Court deems just and proper under the circumstances.

### **JURY TRIAL DEMAND**

Plaintiffs hereby demand a trial by jury.

DATED: August 15, 2016

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& DOWD LLP  
SAMUEL H. RUDMAN  
DAVID A. ROSENFELD  
JOSEPH RUSSELLO  
MICHAEL G. CAPECI

*/s/ Samuel H. Rudman*  
\_\_\_\_\_  
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CERTIFICATION OF NAMED PLAINTIFF  
PURSUANT TO FEDERAL SECURITIES LAWS

JAMES A. CRUMPLEY ("Plaintiff") declares:

1. Plaintiff has reviewed a complaint and authorized its filing.
2. Plaintiff did not acquire the security that is the subject of this action at the direction of plaintiff's counsel or in order to participate in this private action or any other litigation under the federal securities laws.
3. Plaintiff is willing to serve as a representative party on behalf of the class, including providing testimony at deposition and trial, if necessary.
4. Plaintiff has made the following transaction(s) during the Class Period in the securities that are the subject of this action:

<u>Security</u>	<u>Transaction</u>	<u>Date</u>	<u>Price Per Share</u>
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*See attached Schedule A.*

5. Plaintiff has not sought to serve or served as a representative party in a class action that was filed under the federal securities laws within the three-year period prior to the date of this Certification except as detailed below:

None.

6. The Plaintiff will not accept any payment for serving as a representative party on behalf of the class beyond the Plaintiff's pro rata share of any recovery, except such reasonable costs and expenses (including lost wages) directly relating to the representation of the class as ordered or approved by the court.

I declare under penalty of perjury that the foregoing is true and correct.  
Executed this 12 day of AUGUST, 2016.

  
\_\_\_\_\_  
JAMES A. CRUMPLEY

**BHP BILLITON PLC (BHP)**  
**BHP BILLITON LIMITED (BBL)**

**Crumpley, James A.**

**LIST OF PURCHASES AND SALES**

<b>DATE</b>	<b>PURCHASE OR SALE</b>	<b>NUMBER OF SHS/UTS</b>	<b>PRICE PER SH/UT</b>
<b>BHP</b>			
03/12/2015	Purchase	100	\$46.3900
03/12/2015	Purchase	300	\$46.4299
03/17/2015	Purchase	83	\$46.0699
03/17/2015	Purchase	217	\$46.0690
03/13/2015	Sale	400	\$44.3200
03/18/2015	Sale	300	\$47.1700
<b>BBL</b>			
03/18/2015	Purchase	300	\$44.2199
03/20/2015	Purchase	200	\$45.5400
03/24/2015	Purchase	500	\$47.2800
03/30/2015	Purchase	500	\$44.9299
04/06/2015	Purchase	300	\$44.0599
09/30/2015	Purchase	73	\$30.3788
09/29/2015	Sale	900	\$29.8012
10/09/2015	Sale	200	\$36.3600
<b>Option</b>			
Call BHP Aug 21 2015 \$50.00			
03/13/2015	Purchase	4	\$1.5000
03/12/2015	Sale	4	\$2.1200

CERTIFICATE OF SERVICE

I, Samuel H. Rudman, hereby certify that on August 15, 2016, I authorized a true and correct copy of the attached:

Consolidated Amended Complaint for Violations of the Federal Securities Laws  
to be electronically filed with the Clerk of the Court using the CM/ECF system, which will send notification of such public filing to all counsel registered to receive such notice.

/s/ Samuel H. Rudman  
SAMUEL H. RUDMAN